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СЕКЦИЯ «АКТУАЛЬНЫЕ ПРОБЛЕМЫ ЯЗЫКОЗНАНИЯ»

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IDIOMS IN ENGLISH AND THEIR USE

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The problem of the relationship between language and culture takes one of the central places in the problematic research in the framework of linguistic and cultural studies and cognitive science.

The most important function of the language is that it preserves the culture and passes it from generation to generation. That is why language plays a crucial part in the formation of the personality, national character, ethnic community, people, and nation. The reflection of the world in the language is the collective creativity of the people speaking this language, and each new generation receives with its native language a “complete set of culture”, in which the features of a national character, world outlook, morality, etc. are already laid [2].

Cultural values constitute the core of the social picture of the world and find various ways of linguistic expression.

It is known that the most striking fixers of cultural-national standards and culturally significant concepts that are passed on from generation to generation are proverbs that in a brief, aphoristic form express the people's point of view on the main issues of life.

The brilliance and attractiveness of such a genre of folklore as proverbs have contributed to the fact that there is already extensive literature about it.

Proverbs of any language (in this case, English) are products of linguistic, national consciousness as the materialization of the experience of generations and individual representatives of a given people, respectively. It is recognized that the proverb reflects any phenomenon of reality observed by people from ancient times, and therefore is a part of the collective experience of the people. According to A.V. Artyomova, “proverbs do not reflect a fragment of reality, but a rethought about the phenomena of the real world. All their meanings are connected with man, his perception of the world and his attitude to reality” [1].

It is important to add that without a detailed analysis of culture and values, it can be very difficult to translate and understand exactly the mood of the message transmitted to us. It is the proverbs and sayings that will enable us to penetrate into their culture and to understand the person speaking in the future much better. Because idioms, proverbs and sayings reflect the rich historical experience of the people, ideas related to work, life and culture of people. The correct and appropriate use of proverbs and sayings gives speech a unique originality and special expressiveness.

To begin with, it is necessary to give the definitions to idioms, proverbs and sayings and point out their difference. As for idioms, these are set figures of speech. Idioms are easily confused with proverbs, various speech patterns, phrasal

verbs. Sometimes even scientists find it difficult to distinguish the difference between them. For example, the phrasal verb “to look for” cannot be called an idiom. But “to sail through” is already easily confused with an idiom, because it has a figurative meaning. But, as a rule, a feature of proverbs is that they have two plans – literal and figurative. Idioms don’t have such features: they cannot be simultaneously used in the literal and figurative sense. That is, proverbs, sayings, used in the literal and figurative sense, consist of words with quite definite independent lexical meaning, what cannot be said of phraseological units, components of which have a full or partial lack of their independence.

In order to make it easier to further study this topic, it is necessary to highlight and show clearly the similarity between the English and Russian sayings. The most interesting thing is that most nations use in their statements the animal world, with the help of which they interpret the phrase in humor or in wisdom. For example, in English proverbs a mouse, a cat and other pets are more common: “*A cat in gloves catches no mice*”. But in Russian ones woodland creatures are more common. Although there is a common animal, which has about the same meaning in proverbs, it is a horse. For example, the English proverb: “*All lay loads on a willing horse*” (“*На старательную лошадь все груз взваливают*”).

The meaning of the expression is not determined by the meaning of its words. Idioms are a kind of formulaic language, which should be understood as a unit of speech. It is very difficult to understand the meaning of a set of source words. In English there are thousands of idioms, but the exact number cannot be called, just as you can not name the exact number of words in the language. For example, in the Cambridge International Dictionary there are 5782 idioms, but in fact this number is not saying much.

Some idioms live for centuries, while others fall out of use very quickly. And each of them has its own history, origin. Some of the oldest idioms originate from the Bible, other ones were introduced by famous writers, and also they are taken from different foreign languages. And, of course, do not forget about the fact that ordinary people are also related to the creation of new expressions.

Consider some idioms, that is, idioms in English from Bible: “*forbidden fruit*” (запретный плод), “*flesh and blood*” (плоть и кровь (о детях, близких)), “*a wolf in sheep’s clothing*” (волк в овечьей шкуре), “*promised land*” (земля обетованная).

It is worth noting the fact that these idioms are used in Russia as well. But not all the preserved expressions are used in England.

As for writers who have enriched the English speech, it is necessary to distinguish such writers as: Shakespeare, Alexander Pop, Charles Dickens, Walter Scott, Jonathan Swift, Jeffrey Chaucer, John Milton, Rudyard Kipling.

For example, the most popular writers say:

- W. Shakespeare: “*Love is blind*”, “*To be or not to be: that is the question ...*”, “*Brevity is the soul of wit*”, “*Pound of flesh*”, “*It’s Greek to me*”;

- A. Pop: “*Fools rush in where angels fear to tread*” (*fools do not follow the rules*), “*Damn with faint praise*”;

- C. Dickens: *“Never say die” (do not despair), “In a Pickwickian sense” (harmless), “King Charles’s head” (insanity);*
- V. Scott: *“To catch smb. red-handed”, “Beard the lion in his den” (fearless action in relation to the opponent);*
- D. Swift: *“All in the day’s work” (norm), “A sight for sore eyes”;*
- D. Chaucer: *“Through thick and thin” (decisively, without a doubt), “Murder will out” (true triumph);*
- D. Milton: *“Confusion worse confounded” (chaos), “More than meets the ear” (not everything is so simple);*
- R. Kipling: *“The tail wags the dog”.*

Most often native speakers use such idioms as:

1. *“Excuse my French”* – is used in the case when a person expresses obscene language and asks for forgiveness.
2. *“To cross my heart and hope to die”* – is used when a person swears to do or not do something.
3. *“To keep your head up high”* – do not be afraid of anything and be proud of yourself.
4. *“To make a killing”* – when a person was able to succeed in a short time.
5. *“To shoot for the stars”* – the pursuit of a dream, a goal.
6. *“An elephant in the room”* – is used when there is a certain problem that nobody wants to talk about, but everyone understands.
7. *“When pigs fly”* – is used to say that one thinks that something will never happen
8. *“Let the sleeping dogs lie”* – do not remember the past, leave everything as it is.
9. *“To be over the moon”* – means to be very happy.
10. *“To go down the tubes”* – means failure.
11. *“Dark horse”* – means unexpected winner.
12. *“You are missed the boat”* – when a person missed the opportunity or was late.
13. *“Break a leg”* – means good luck
14. *“Piece of cake”* – when something is very simple.
15. *“Neighbor’s grass is always greener”* – means that another person has a better life [3].

An integral part of everyday English is English idioms, proverbs and sayings. They are quite common both in writing and in colloquial English. Idioms, as a rule, should not be understood literally. To understand this body of language, it is necessary to become familiar with the meaning and use of each particular idiom. At first glance, this may seem like a time-consuming task, but studying idioms is very interesting, especially if you compare English idioms with phraseological units in your own language. When you learn to use common idioms and expressions, you can speak English fluently. Learn a few of these expressions; they will be useful to you.

Thus, we determined the historical and cultural value of idioms and proverbs, also revealed the relationship and similarity of English and Russian statements.

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ACTUAL PROBLEMS OF LINGUISTICS

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Language evolution, the field of linguistics, occupies an intermediate position between theories of the origin of the language and the study of diachronic universals. It is included in the overall set of sciences involved in human evolution.

The question of whether there is a certain common force that determines the development of languages was dealt with in antiquity. This force was called differently: the principle of least effort, the factor of economy of efforts, the factor of laziness, etc. However, the final formation of the theory of linguistic evolution as a branch of science in general, using the achievements of anthropology, paleontology, history, linguistics, etc., occurred only at the end of the 20th century, when specialized journals on this subject began to be published (for example, “The evolution of language” etc.), conferences are organized (for example, Evolang, Paris, 2000), etc.

Language evolution was an intellectual orphan in linguistics, often referring to the soft, speculative periphery of the field. Some of the reasons for this trend include deep-rooted epistemological prejudices that licensed the artificial, rigid boundary between biological and cultural, genetic and scientific, modular and distributive - with language taken as the main example of cultural, educated, distributed potential. Nevertheless, although language as a cultural phenomenon may go beyond purely biological possibilities, it remains a deeply adaptive biological phenomenon. And, as elsewhere in biology, a complete understanding of this phenomenon and, in particular, the explanation of some of its more mysterious features is impossible outside of the evolutionary structure. [2]

New times bring new problems, even for old sciences and linguistics is not an exception to this rule. Some appear due to new technological advances, some are

due to changes in geopolitical situations, others are because of the use of a synergistic approach to various problems, allowing a completely new look at the eternal subject. In a sense, linguistics is particularly prone to this particular approach, because language is something that unites all people, and everyone should still resort to language in all areas of their activities.

One example of this approach is a whole and relatively new discipline in the field of academic education, called ecolinguistics that is a discipline based on the assumption that the language exists in close connection not only with cultural, sociological and economic factors, but also environmental ones as well. And vice versa - discourses existing in a certain language can have a strong influence on the psychology of people using it, and, consequently, on the ecological situation of the environment they live in. At first glance, such a combination may seem strange and even funny - after all, it is difficult to imagine areas of study that would be farther apart than the sciences dealing with language and the environment respectively. Nevertheless, such connections have been found, and the fact that ecolinguistics exists today as a discipline underlines the holistic nature of modern science - no aspect of this world can be said to exist in isolation. Everything is connected with something else, and we can get additional understanding by studying it from points of view that are not usually related to the subject [1].

However, together with new challenges, there are always problems in each science that may remain unsolved for many years and even centuries. Linguistics is not an exception. Some of the issues listed below are usually considered unresolved; it is generally agreed that the solution is not known. Others can be described as contradictions; despite the fact that there is no common agreement about the answer, there are established schools that believe that they have the correct answer [2]:

Linguistic problems and difficulties can be classified as lexical, syntactic or semantic ones depending on their context. Lexical problems include the interpretation of specific words or phrases rather than whole classes. These problems exist regardless of the context, although they are obvious only in it. Syntactic problems include structural relationships between words or phrases; they are often expressed semantically but this is a symptom rather than a cause. Semantic problems are divided into lexical, syntactic and discursive types. Although lexical and semantic lexical problems include individual words or phrases, semantic problems are syncategorial rather than specific. Semantic problems in syntax arise when the syntax of a construct is correct, but its meaning is poorly formed or ambiguous, or vice versa. Semantic discourse cases include the discourse context of the statement and, since statements of this type are syntactically and semantically well-formed, they describe language difficulties but not problems.

There are some lexical difficulties such as

1. Lexical Ambiguity

- in syntactic category (part of speech) – “*sink*”, “*saw*”, “*club*”, “*ring*”

A *sink* is a -plumbing-fixture- noun as well as a verb that means to -disappear-underwater-. Syntactically ambiguous words can in addition be semantically ambiguous within a given category. As a noun, 'club' is a homonym for both -bludgeoning-weapon- and -recreational-association-; within the latter sense, it is polysemous because it can mean both recreational-social-group and -recreational-building-. Taken as a set the examples suggest that syntactically or semantically ambiguous words are often common and short.

- in word denotation – “*Baker*”, “*Quebec*”

These words denote a man or a role (1), or a city or province (2). Denotational ambiguity can affect quantification; a baker is a general role but Baker is a specific person.

- in abbreviation denotation – “*Jan*”, “*MA*”, “*BC*”

Accordingly, these particles denote a name or a month, a degree or a state, as well as a province or period of historical time. Abbreviations differ from words in being able to use punctuation marks and capital letters, which can help distinguish their different meanings. These aids, however, may be missing, partial or non-standard.

2. Idioms

Idioms come in all sizes – words, phrases and clauses. They can include coinages (redeye, yuppie) and proper names (carry coals to Newcastle) and may have relatively short lifespans (ayatollah of popular culture). Idioms that survive long enough pass into the language permanently (xerox).

3. Subidiomatic Expressions

In addition to idioms based on nouns and verbs or those with substantial concrete sense, there exists a class of subidiomatic expressions which act as facilitators of expression or linguistic shortcuts. These expressions are usually based on modifiers and may have co-occurring parts of speech. A subidiom's sense limited and is homologous to the sense of the modifier or the part with which it occurs.

As for syntactic difficulties, they are the following:

1. Syntactic Ambiguity

- in modifier scope – “*the old men and women*”

Only context can tell whether this phrase means “old men and old women”, or “old men and women of unknown age”.

- in phrase reference – “I saw him on the hill with a telescope”; “He worked on the table on the paper”, “He worked on the paper on the table”.

The first sentence has three readings which depend on how the last prepositional phrase is interpreted. If “with a telescope” is read as accompaniment, it can modify “him” or “hill” and produce “he and a telescope were seen on the hill” or “he was seen on the hill which has a telescope on it”. If the phrase is taken as identifying the instrument used for seeing, it produces “he was seen on the hill by use of a telescope”.

The second and third sentences show how ambiguity arises when a sentence contains more than one phrase that can play more than one available role. Selecting

one role for the first phrase automatically assigns the second phrase to another. Thus, any sentence can be interpreted as saying that someone sitting at the table writes paper or that the table is painted or polished over spreading paper. At can be replaced by on anywhere.

2. Ellipsis

A literal reading of either sentence asks the question: than he does what? Ellipsis within a sentence can frequently be identified by the presence of coordinating conjunctions or punctuation between an elliptical clause and its referent. Elliptical reference between sentences frequently relies on structural symmetry between the two related expressions.

Example: *“She dances better than he does”, “I did it; he didn’t”.*

3. Preposed Phrases

This slightly unusual construction emphasizes the opening phrase. There are no problems in processing, particularly since the presence of structural punctuation signals the likelihood of distance dependency (between ‘had’ and ‘for’).

Example: *“For each person there, I had a gift”.*

The more fluently we speak the language, the deeper understanding of the words and their meanings we need. Knowing only one meaning of a word becomes restrictive and ineffective. Words have conceptual, connotative, collective, affective, stylistic and other meanings.

- Conceptual meaning, also called cognitive, denotative, or primary, is the first meaning that appears in our mind when we see a word in isolation.
- Connotative meaning varies according to age, culture or individual experience; it conveys feelings and emotions associated with the word, for example, “white” can have a positive connotation, because it is usually associated with light, purity and innocence.
- The stylistic meaning reflects the social situation, for example, the news on television will not sound the same as when my best friend repeats what was announced.
- The affective value conveys the individual feelings and attitudes of the speaker: politeness, irritation, sarcasm. Tone and intonation help convey affective meaning.
- The collocative value refers to the word “partnerships”, which are always found together and must remain unchanged. Replacing any word with a synonym affects the meaning, for example, collocative pairs “just in time, attract attention, are of great importance”.

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А.А. Корчагина, В.В.Соскина
ENGLISH AND FRENCH:
SIMILARITIES AND DIFFERENCES

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People communicate with each other and share their thoughts, emotions, mood, and all this is done with the help of words. Everyone wants others to understand him. When you know a foreign language, many opportunities for communication open up. You can learn a lot about different traditions and cultures, you can meet different people - now it is very easy, and the Internet gives unlimited opportunities for dating.

This is especially interesting for young people: boys and girls from different countries want to communicate, tell each other about their lives.

In our time of globalization, knowing a foreign language is vital. Let's look at examples where you still need to know a foreign language:

- To travel freely throughout the world

Now there are opportunities to visit any country and going abroad you come across the need to explain to a person who does not know Russian that you need something. Guides are good, but they do not always help you. You have to talk in the hotel, and during city tours, and in shops. If you know English, you will be understood almost everywhere. This language is known even in countries remote from England and America. In Europe, everybody speaks, as a rule, several languages: their native and English are compulsory, and another one or two languages of the neighboring countries.

- Watch movies and read original books.

A lot of sense is lost when translating, especially humor suffers. It is much more pleasant to listen to your beloved actor when he speaks, and not in translation. There is even such a language learning system. You watch your favorite movies (which you have already seen several times) in the original language, you understand the meaning, and you remember how certain phrases sound. And in this way it is good to understand and develop pronunciation. Reading and memorizing is one thing, and communicating with native speakers is another.

- To get a good job

If you are interested in a career, good earnings, a decent standard of living, knowledge of languages will be very useful in realizing these goals. Now employers require knowledge of English or another language, depending on the

country which their company works with. For example, there is a need for workers with knowledge of Chinese. There are many international enterprises in all large cities, and it is impossible to work in such a company without knowing a foreign language. Knowledge of the language also means that you try and love to learn, you can develop your abilities. It is a great advantage.

There is no doubt that you need to learn English, it plays an integral part in our life. English is the language of international communication in which all conferences, lectures, congresses, congresses and seminars are held. It is in English that all signs are duplicated at stations, at the airport and train stations. About 1.5 billion people speak it.

As for French, French language skills are the key to success in the international labor market in various areas of activity (retail, automotive, luxury industry, aircraft manufacturing, transport, agro-industry and food industry).

Knowledge of French opens the doors to French enterprises both in France itself and in foreign branches, especially in French-speaking countries (Canada, Switzerland, Belgium, African states).

France is the fifth largest economy in the world, ranks 3rd in terms of attractiveness for foreign investors, and also 3rd in terms of investment in the Russian economy. France is one of the main economic partners. Auchan, Danon, Schneider Electric, Renault, LVMH are enterprises that have firmly established themselves on the Russian market. French language skills are one of the advantages for obtaining a position in these companies.

The given task is devoted to the comparative analysis of English and French, pointing out their differences and similarities and features.

French is Indo-European language and belongs to the Romance language family along with Spanish and Italian.

The English language was strongly influenced by the French dialect during the Norman invasion of Britain in the 11th century. As a result, the two languages have common grammatical features and contain much related things.

Alphabet

The French alphabet contains the same 26 letters as the English alphabet, and letters with emphasis marks.

French uses the following emphasis marks:

1) *é* (stress of aigu) is the most frequent emphasis mark of the French language, but is placed only above the letter “e” to indicate the sound [e] and only in the open syllable: *été, répéter*.

2) *è, à, >* (stress grave (grav)) - during the last two years it does not affect the sound quality and plays only a meaningful and distinctive role.

Above the letter “e” is placed a closed syllable, followed by “e silent” if the syllable ends:

* one consonant: *le père; la crème;*

* the group of indivisible consonants: *une règle;*

* a combination of letters pronounced as one consonant: *une bibliothèque.*

In some words it is placed above the “e” before the letter “s” in the last open syllable (and the last “s” is not pronounced): *un congrès, très*.

Exception: do not put any signs above the “e” before a double consonant, and before x: *pelle, trompette, circonflexe, mexicain*.

3) â, â, ",,"(stress circonflexe) – in the first three cases it affects the pronunciation of vowels, in the last two it is written according to tradition instead of letters that disappeared during the historical development of the language;

4) î, î, ü, ÿ (tréma (three)) – shows that in this case there is no formation of a diphthong or other sound;

5) ç (cédille) – is placed only under “C”, indicates that the letter is read as [s] regardless of the letter following it.

A ligature is a sign formed by the merging of two or more graphemes. Two ligatures are used in French: œ and æ. They are digraphs, that is, they transmit one sound, and in writing they consist of two graphemes.

There are no emphasis marks in English. English spelling reflects the phonetics of a language — not modern, but thousands of years old. At first there were letters without emphasis marks. In addition, borrowed words in English tend to retain their emphasis marks.

Phonology

There are some differences in the sound systems of the two languages, which can cause problems of the French language with understanding and pronunciation. Spelling errors in English can occur due to frequent inconsistencies between the pronunciation of English words and their spelling.

A typical French problem in English pronunciation is the inability to correctly formulate vowel sounds in minimal pairs, such as *grin/green, sin/seen, mow/more*. Since the tip of the tongue is not used in colloquial French, students often have problems with words containing a combination of letters: *thorough, thrash, method*.

Another feature of English-speaking French students is the skip [h] at the beginning of a word. This sound does not exist in French, which leads to the fact that many French people actually speak like Fleur Delacour from the Harry Potter epic: “*as she 'eard about 'er 'usband?*”. There is another problem — they try too hard and pronounce [h] in such words as *honour*.

French students tend to face unpredictable stress in English, especially in word forms and cognate words (stress in French is fixed and always falls on the last syllable).

They also do not observe the natural reduction of vowels in unstressed syllables in English. English native speakers “swallow” the vowel in the first syllable of a word like *t'day*. The French usually try to say all vowels as clearly as possible.

English Phonetics

1. Vowels – during the pronunciation does not create any barrier to air. The pressure is minimal.

2. Consonants – throat narrows, completely or partially blocking the air flow. It overcomes obstacles, changing direction one way or another.

In writing, all sounds are displayed using a phonetic transcription – a special way of transmitting sounds, in which each of them has its own written symbol. Transcription accurately reflects all the features of sound, showing length and accent.

It should also be noted that in English words can have strong or weak form. When a word is underlined, it is considered that it is in a strong form. If the word is not underlined, then it is accordingly in a weak form. Conjunctions, pronouns, and prepositions are often weak. For example, in the preposition sound [ɒv] is a strong form, and sound [əv] – weak form. In almost all cases, the presence of a weak form is due to the replacement of a stressed vowel in a strong form with an unstressed one; in all other cases the sound is reduced. In the transcriptions of all English textbooks, sounds are displayed in a strong form, because knowing the strong form of the sound you can easily turn it into a strong form.

It is important to know:

1. In English sounds are never softened, but always pronounced firmly.
2. Sounds do not double, for example, the word running is pronounced as [ˈrʌnɪŋ].

French phonetics

1. The stress in the word falls on the last syllable.
2. Vowels are pronounced clearly and do not change in sound in an unstressed position.
3. Consonants are pronounced more intensely; voiced consonants do not stun at the end of a word.
4. Consonants do not soften before vowels.
5. Double consonants are pronounced as one sound.

A large number of words in two languages have the same Latin roots and are mutually understandable, although this refers more to academic or technical specialized vocabulary than to the words of everyday communication. This parallelism is accompanied by a large number of “false friends”, that is, words that are similar in sound and writing, but express different concepts in two languages. Thus, the French *ignorer* does not coincide in meaning with the English *ignore*: the first means “not to know, to be ignorant”, and the second - to “ignore”.

As practice shows, knowledge of English can often do a disservice in trying to read or translate the text in French. Fortunately, you can start learning French from scratch under the guidance of an experienced teacher who will explain you such a phenomenon as “false friends” and teach you to pronounce nasal consonants.

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**THE STUDY OF FOREIGN LANGUAGES
AT NON-LINGUISTIC DEPARTMENTS**

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Among the numerous problems that applied linguistics faces, the most important is the problem of effective and purposeful study of foreign languages in a non-linguistic university. This problem is an integral part of those tasks that become particularly relevant in connection with the implementation of technical progress. The development of all scientific fields and, above all, the exact sciences is completely impossible without rationally set regular and completely reliable scientific information. However, until now, prompt information and its processing are extremely slow and difficult because not all specialists of the relevant scientific fields have sufficient knowledge of even the main world languages [4, с.23].

The search for rationalization and increasing the efficiency of the process of learning foreign languages is often unproductive, because the focus is on the definition and classification of those approaches or methods that are recommended to be used when studying pronunciation, explaining and mastering grammatical rules, words, word combinations, etc. In other words, the focus so far is on the desire to find the most rational answers to the question of how to learn and, accordingly, to teach foreign languages. Much less attention is paid to the question of what must be studied and taught, that is, the content of the relevant process, rather than the form of its implementation. In particular, there are still virtually no studies devoted to the features of the structure of a scientific text in general, that is, such an analysis of its vocabulary, morphological and syntactical constructions which, if properly organized, should be the main subject of the study and should be at the centre of attention.

The discussion of the issue of rationalization of foreign language learning in a non-linguistic university involves the clarification of the properties, qualities, sides or characteristics of this process, which fundamentally distinguish the study of languages in a non-linguistic university from their study in philological or linguistic [2, с. 41]. In short, this main difference can be described as follows.

When a language is studied as a specialty, the main subject is the most complete disclosure of those specific features of the expression that the language under study uses. In other words, a linguistic specialist first of all focuses on the connotations that a given language brings to the expression of a particular thought, thus speaking in its particular, unique to it idiomatic content. On the contrary, a non-expert linguist, that is, anyone who studies a language not as a special scientific subject and not as a scientific specialty, but only as a means for deeper acquaintance with various information relating to a completely different subject, is indifferent to the more gentle nuances of expression, in particular to those artistic means, which are addressed by one or another authors, to those gentle connotations that are essential features of the foreign language being studied.

For example, if a linguistic specialist facing a complex and branched synonymous line has to penetrate all the gentle metasemiotic connotations which they operate with when choosing one of the objects of this line, non-linguists will be completely satisfied only by establishing a common conceptual identity between such units, they will not be able to understand the gentle nuances achieved by choosing different synonyms in the artists in general speech and in particular in poetic one. Hence there are numerous attempts to achieve automatic information retrieval, attempts of machine translation [1, c. 36].

Although the linguistic study of a scientific language is still in an unsatisfactory state, and the methodology of this work itself presents great difficulties, due to its poor development, it must be note the promising steps taken in this direction by many universities that organize wide participation of members of language departments of faculties in conferences devoted to issues of teaching foreign languages in higher schools [3, c. 143].

Students come to the university with certain knowledge of a foreign language. They are familiar with the basics of grammar; they have a certain vocabulary, allowing them to read adapted literature of mid-level. At the initial stage of learning a foreign language students face the problem of studying already known everyday topics. A first-year student does not see the difference between studying at school and in high school. The result is a loss of interest in the subject; students consider a foreign language as a secondary, unnecessary subject. The problem of interest is one of the main ones at the initial stage of education. From the very beginning of studying at a university, giving literature on a wide profile specialty, according to many researchers is one way to keep students interested in a foreign language and make it an assistant in mastering a specialty [3, c. 121]. Scientists point to the advantage of learning by means of professional texts of a wide profile at the initial stage of training.

The main purpose of learning foreign languages in a non-linguistic university is the practical knowledge of a foreign language for understanding literature according to the main specialty and professional communication. Often in the system of university education, teachers face the problem of the lack of educational material built on rationally selected language material and at the same time including the vocabulary of a particular area of the main subject. In this

connection, the question arises about the optimal selection of language material and the most rational planning and organization of foreign language classes.

When establishing a work plan for a course of study, it is necessary to take into account that all hours of learning foreign language should be devoted to working with special literature. Classes organization is based on the distinction between forms of activity that require preliminary classroom work (training exercises, sounds training, reading, phase stress, intonation, etc.) and those that are more appropriate to include in the self-study block (grammar rules with exercises, text translation, some exercises according to the text, etc.). Also, when monitoring exercises, it is rational to divide the exercises into those that require oral (filling in gaps with prepositions or articles) and written testing (grammatical phenomena that cause changes in the spelling of words, translation, etc.). Oral and written testing can be carried out simultaneously.

Working on pronunciation and reading technique is the most difficult for students, so many researchers recommend starting each lesson with training exercises. You should read the text after its preliminary translation, as meaningful reading with the correct articulation of speech cycles, phase stress, intonation can be achieved only by knowing the content of the text.

Translation teaching is regarded as one of the most effective forms of working on a language, and translation itself is considered the best means of controlling vocabulary and grammar knowledge. During such lessons students gradually go through various stages from the “word-by-word” to a correct, accurate translation taking into account all the norms of the Russian literary language. This type of activity is inextricably linked to the work with the dictionary and the ability to analyze sentences, therefore, as a transitional stage to the second stage of learning foreign language, when students begin to work with special literature, it is useful to give certain information on the use of dictionary material, as well as on grammatical analysis as a means of understanding a foreign text.

Formation of oral language skills among students is the most time-consuming type of work in teaching foreign languages. As practice shows, often focusing on one of the components of foreign language proficiency affects others. Thus, special emphasis on the development of conversational practice in the process of training distracts students from learning the translation of special literature due to the fact that controlling conversational topics takes up most of the classroom time. In this regard, it seems more appropriate to use oral practice in the language material of the textbook. It should be noted that various textbooks do not always contain the lexical material necessary to complete the topics indicated in the course program.

University graduates should have the skills of oral speech in a foreign language, be able to exchange views on the most acute issues, including, of course, issues related to their specialty, to make a report on the specialty. To do this, you must have conversational speech skills and know the special terminology. On the other hand, they should also be able to read and understand a foreign text both a general text and a professional one. The learning process is structured in such a way that the focus is on the independent work of students, since the use of

literature in the specialty at senior courses implies, above all, the ability to work independently.

At the initial stage, the main points that prepare students for their further independent work on the professional texts can be considered to be the inculcation the skill of regular work on the language, as well as the development of criteria for evaluating the results of their work. To do this is recommended on the basis of small passages from original works of a general nature. Since the task of this stage is to develop students' speaking skills, it helps them to concentrate on their studies and facilitate their *learning acquisition*. Students expand their vocabulary, master the basic lexical and grammatical structures, and repeat the basic grammatical material. At the second stage, the role of home reading increases noticeably. As a result, students acquire the skill of reading and translating large original texts of a general nature. Then you should begin to study the special literature. At the final stage of education, students are already applying their previously acquired knowledge, and also continue to expand their vocabulary in their specialty.

As a result of this work, students cope with the translation of any article in their field and can exchange views on it. The main task of the teacher is to ensure the interest of the learning process not only from language standpoint, but also from the specialty, involvement in the discussion of the acute issues.

At the university, a foreign language appears primarily as an organic and indispensable component of the training of future specialists. Language learning in a non-linguistic university can be effective if it is professional. The ultimate goal setting for a language course is determined solely by the needs of the specialization.

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ABBREVIATIONS IN ENGLISH

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With the development of technology, people began to spend all their time on electronic gadgets. Usually in SMS modern youth tries to print as few characters as possible to save time and money. They try to shorten phrases, skip parts of speech that will not affect the basic meaning of the phrase. Auxiliary verbs or auxiliary parts of speech are often omitted. In addition, individual words can be abbreviated, individual letters or syllables in them are often skipped.

The widespread development of abbreviation and the use of abbreviated lexical units has become a common trend for many national languages. The number of acronyms in the world is growing at a high rate and it becomes difficult to consider all the emerging abbreviations.

The creation of abbreviations is one of the fast-developing processes, it is a natural, old and universal tendency of the language. However, the progressive replenishment of the abbreviations' fund becomes a significant factor, which deserves to be studied and evaluated. A rational approach to a normalizing activity should also be searched for.

The topic of this work is relevant due to the fact that at present abbreviation is one of the main methods of word formation, so the study and analysis of the peculiarities of abbreviation is extremely important.

The word «abbreviation» comes from Italian «abbreviature» and Latin «brevis», which means «short». An abbreviation is a word formed by the abbreviation of a word or phrase and read by the alphabetical name of the initial letters or by the initial sounds of the words included in it. Various parts of speech are subject to reduction. For all grammatical forms of the same word, the same abbreviation is used regardless of gender, number, case and tense. Abbreviations are used to save the writer's time and paper space. However, only those abbreviations that are understandable to a wide range of readers for decoding are considered acceptable in texts. Scientific journals usually ask the contributors to form a separate list of abbreviations found in the article. It is undesirable to use abbreviations-homonyms in one text, for example, g - city and g - year.

In accordance with the rules of one and the same word can be shortened in different ways, because all reductions and all abbreviations are divided into stable forms, free abbreviations and other types. [1]

Abbreviations occur in most languages. Abbreviations are mainly characteristic of teenagers and young people aged 25-30 who do not want to waste time using full forms of words and think about lexical compatibility. Abbreviations are also used when communicating via SMS. In this case, the shortenings are needed to save money. [2]

The beginning of the word shortening process dates back to ancient times. The abbreviation in different types of recorded speech is as old as the written

language itself. [3] Abbreviations have long been applied in writing by all the peoples who have written language. The purpose of abbreviations was to save space on the medium of textual information (birch bark, ceramic tablets, parchment, etc.) and to increase the speed of writing in frequently used words and expressions. One of the first abbreviations appeared in the ancient inscriptions, later it received distribution in manuscripts. Using the initial letters of the words the Romans shortened first their own names (s. — Gaius, Q. — Quintus), and later other words (Cos. — Consul, V. S. — Vir clarissimus, «The Shining Husband»). The repetition of the same letter denoted sets, the number (Coss. — Consules, VV. cc. — Viri clarissimi). Similar abbreviations are found in Greek cursive papyrus and inscriptions on coins. Almost all bronze coins issued before the end of the 3rd century BC have letters SC on the reverse side. In the era of the Empire several series of coins made from precious metals that had the inscription «AD» were released.

Abbreviations are found in any language of the world and play a huge role. Sometimes ignorance or incorrect use of a particular abbreviation in English can lead to a rather awkward situation or misunderstanding of what the interlocutor wants to express in a particular phrase. [4]

This list of abbreviations can be found everywhere and you are familiar with most of them visually, but now pay attention to their correct translation and use:

V. I. P. (very important person) – very important person;	UNESCO (United Nations Educational, Scientific and Cultural Organization) – UNESCO;
P.S. (from lat. «post scriptum») – after written;	a.m. (ante meridiem, in the morning);
A. D. (from lat. «Anno Domini») – our era;	p.m. (post meridiem, in the afternoon) – evening;
B. C. / B. C. E. – before Christ – before Common Era – BC;	i.e. (id est, that is) – this means;
ASAP (as soon as possible) – as soon as possible;	e.g. (exempli gratia, for example);
UNO (United Nations Organization) – UN;	u (you) – you;
2moro (tomorrow) – tomorrow;	etc. (from lat. et cetera) – and so on;
2day (today) – today;	2G2BT (too good to be true) – too good to be true;
BD or BDAY (birthday) – birthday;	4ever (forever) – forever;
2nite (tonight) – evening;	BTW (by the way) – among other things;
BRB (be right back) – coming back soon;	RLY (really) – really;
TTYL (talk to you later) – talk to you later;	AKA (also known as) – also known as;
IMHO (in my honest opinion) – in my opinion, in my opinion;	TIA (thanks in advance) – thank you in advance.

Writing business letters and writing business correspondence today requires quality study and a careful approach. Faced for the first time with the design and interpretation of abbreviations in business English, a beginner sometimes feels confusion and bewilderment what it all means. The difficulty lies in the correct use of a particular abbreviation, as well as in the specifics of the business vocabulary. However, as in any field of language learning, knowledge and a little practice will help to cope with any difficulties.

A number of abbreviations are used only in writing, but in oral speech full forms of the words are pronounced:

Mr. (mister) – mister;	Sq. (square) – square;
Mrs. (mistress) – Mrs.;	Rd. (road);
Dr. (Doctor) – doctor;	Bldg. (building) – building;
St. (Saint / Street) – Saint or street;	B. Sc. (Bachelor of Science);
Blvd. (boulevard) – Boulevard;	M. A. (Master of Arts) – master of arts;
Ave. (avenue) – Avenue;	Ph.D. (Doctor of Philosophy) – PhD;

The most popular business abbreviations of English words are given below:

PA (personal assistant) – personal assistant;
Appx. (appendix) – application;
Re. (reply);
p. (page);
smth. (something);
smb. (somebody);
vs (lat. versus) – against;
etc. (lat. et cetera) and so on

Popular three-letter acronyms (TLA or Three-Letter Acronyms) in business are:

CAO (Chief Administrative Officer) – chief of staff;
CEO (Chief Executive Officer) – chief Executive officer (CEO);
exp. (export) – export – export of goods abroad;
HR (human resources) – personnel service of the enterprise;
HQ (Headquarters) – General management of the company;
LLC (limited liability company) – limited liability company (LLC);
R&D (research and development) – research and development;
IT (information technology) – information technology;

The computer is considered to be one of the greatest inventions of the twentieth century. Naturally, like any invention, the computer has generated a powerful new layer of terminology, which develops according to the general

semantic laws and at the same time has a number of specific features. This is due to the fact that the formation of the terminological system is somewhat behind the development of the theory and practice of this science, so the free lexical space is filled with humorous and ironic terms. Thus, the computer jargon is a special linguacultural phenomenon that deserves close attention and study.

As mentioned above, in English there are three-letter Acronyms (TLA) that help to shorten and compress fairly large phrases to 3 letters. Today it is quite a popular way to save time when chatting on social networks. BTW (by the way) – by the way;

FYI (for your information) – for your information;

JIT (just in time) – on time;

IOW (in other words) – in other words;

NRN (no reply is necessary) – no response required;

OTOH (on the other hand) – on the other hand;

As for SMS abbreviations, there are a huge number of them;

The specific feature of such abbreviations is that it is almost impossible to decipher without detailed analysis.

Examples of abbreviations in SMS are:

GL (good luck) – good luck;

GB (good bye) – bye;

DNO (don't know) – don't know;

B4 (before) – before;

ASAYGT (as soon as you get this) – once you get it;

BON (believe it or not) – believe it or not;

BW (best wishes) – best wishes;

BZ (busy) – busy;

CYT (see you tomorrow) – see you tomorrow

Abbreviations are an important language issue. Using only a standard set of abbreviations people stop using adjectives, participle, and other complex constructions. Hence the poverty of speech, the lack of the ability to express their thoughts correctly and clearly.

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СЕКЦИЯ « ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ»

О.С. Караганова

ПРОБЛЕМЫ ДОСТУПНОСТИ ВЫСШЕГО ОБРАЗОВАНИЯ В ВЕЛИКОБРИТАНИИ

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Право на образование является одной из свобод, за которую борются все народы мира в течение всей своей истории. В Великобритании в начале 19 века университетское образование было привилегией только для выходцев из богатых семей. Выпускники вузов составляли менее 1% численности населения, при этом число женщин среди них было меньше, чем мужчин. С тех пор в системе высшего образования Великобритании произошли существенные изменения, которые были следствием как различных экономических, социальных и политических сдвигов в обществе, так и прямым результатом сокращения влияния церкви. Особую роль сыграли, в частности, индустриализация, урбанизация, появление новых профессий и спроса на них, стремление людей к демократии и к равенству прав мужчин и женщин. С целью предоставления более широких возможностей для обучения по самым разным учебным программам были созданы новые университеты. Исключительное господство Оксфорда и Кембриджа в высшем образовании было разрушено. Одновременно рост среднего класса и увеличение числа профессий привели к повышению спроса на знания.

В течение всего 19 века главным лозунгом борьбы за доступ к высшему образованию была ликвидация неравенства возможностей, в частности для рабочего класса и женщин. В начале 19 века редко поднимался вопрос о том, что и представители рабочего класса должны обучаться в университетах. Особенно долго сохранялись ограничения на учебу женщин в вузах, поскольку господствовало представление, что женщины обладают более низкими интеллектуальными способностями и не могут овладеть знаниями высокого уровня. Часто использовался и аргумент о биологических различиях между полами, которые обуславливают умственное отставание женщин.

Современное население Великобритании гораздо более разнородно в этническом и культурном планах. Церковь значительно меньше влияет на государство и отдельных граждан. Существует меньше ограничений, касающихся их религиозных взглядов, классовой принадлежности, расы или пола. Правовая система нацелена не на ограничение доступа к образованию, а на ликвидацию неравенства. Тенденция к индустриализации экономики уступила место масштабному развитию сектора услуг, что вызвало соответствующие изменения в структуре рабочей силы и спросе на отдельные профессии. Сейчас в промышленности занято только 17% рабочей

силы. Женщины составляют в настоящее время 45% трудовых ресурсов. В настоящее время более 30% молодежи выбирают ту или иную форму получения высшего образования, и свыше половины студентов вузов составляют женщины. Особенно быстро перемены в образовании происходили в последние тридцать лет. В результате высшее образование из привилегированного стало массовым. В 1971 г. в 45 вузах страны обучалось 176 тыс. студентов, а к концу века их численность возросла более чем в 10 раз – до 1,8 млн человек [3, с. 117]. Женщины и национальные меньшинства представлены среди студентов шире, чем в населении в целом. Хотя баланс между мужчинами и женщинами изменился в пользу последних, по отдельным направлениям обучения сохраняется доминирование мужчин. Доступ представителей рабочего класса и национальных меньшинств в вузы остается ограниченным. Если среди детей из семей высококвалифицированных кадров 70% обучаются в университетах, то среди детей из семей неквалифицированных работников таких только 13%.

Существенно расширились возможности обучения для взрослых: многие университеты разработали специальные формы неполных курсов обучения и гибкого обучения для этой категории населения. На протяжении XX в. многие правительства Великобритании признавали наличие проблемы неравенства доступа к высшему образованию для отдельных групп населения и проводили политику, направленную на сокращение такого неравенства. В 30-е годы XX в. основной причиной неравного доступа к образованию был финансовый фактор – неспособность оплачивать обучение в вузах. В послевоенный период были предприняты попытки снять финансовые ограничения и заменить систему доступа к высшему образованию, основанную на привилегиях, системой, в которой во главу угла ставятся способности и достоинства претендентов. В 60-е годы путем введения системы стипендий и оказания помощи способным студентам из малообеспеченных семей были сняты финансовые ограничения для их обучения в университетах. Следствием стал бурный рост притока в вузы молодежи, в том числе женщин. Лейбористское правительство Т. Блэра, пришедшее к власти в 1997 г., поставило перед собой задачу увеличить долю студентов вузов среди лиц в возрасте 18–30 лет до 50%. Оно стремится расширить доступность высшего образования для детей из малообеспеченных семей. Однако, несмотря на усилия правительства и руководства вузов, доля поступающих в университеты, притока молодежи не наблюдается с 1996 г. Значительная часть населения по-прежнему не рассматривает достаточно серьезно идею поступления в университет. Однако произошло изменение в отношении к образованию, а потому выбор в пользу получения высшего образования делается чаще, чем двадцать лет назад. По оценкам экспертов, в начале 1990-х годов сформировалась так называемая «культура колледжей», т.е. определенная культура образования, в рамках которой продолжение обучения после 16 лет считается нормальным явлением [2, с. 40]. Исследования показали, что выбор между работой и

продолжением учебы, который делают молодые люди после окончания школы, зависит от социального происхождения, способности получить необходимые для поступления в вузы подготовку и баллы на экзаменах, образа жизни и социального статуса, текущей ситуации на рынке труда и т.д. Вместе с тем статистика свидетельствует, что ключевым фактором, определяющим выбор молодых людей, является социальная среда, из которой они вышли. Дети из семей, где не было принято учиться в вузах, попадают в чуждую им среду. Университеты и колледжи базируются на культуре, привычках и традициях, свойственных высшим и средним слоям общества, а потому выходцы из других слоев испытывают серьезные психологические трудности при обучении.

Таким образом, не только экономические и финансовые, но и социальные и культурные барьеры затрудняют отдельным группам населения получение высшего образования. [1, с. 116]

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FEATURES OF EDUCATION IN ENGLAND

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Education is the process of getting knowledge, skills and abilities. In modern society, the better education a person has, the greater the chance of finding a good job with decent wages, and further prospects to have a successful career. However, in any country education system has its own unique features and distinctive features, pros and cons.

Education is a single purposeful process of education and training as well as a set of acquired knowledge, skills, values, attitudes, experience and competence [1]

In the broad sense, education is a process or a product of the formation of the mind, character, and physical abilities of an individual. Education is the process of transferring knowledge accumulated in culture to new generations. Education is given by society through educational institutions: kindergartens, schools, colleges,

universities and other institutions that, however, do not exclude the possibility of self-education, especially due to the wide availability of the Internet [2].

For many centuries, and today one of the best in the world is considered the education system in England which develops and meets high quality standards.

It starts with the preschool education system – it is a mandatory part of general education. This system starts learning from the age of 5. The curriculum for preschool education in the UK is based on the principles of supporting children’s initiatives. In the process of education the individual characteristics of children are necessarily taken into account. At the same time, at the stage of preschool education, babies are actively prepared for primary school – they are taught to read, write, count. As a result, the majority of pre-school graduates have good skills in elementary school education. This is one of those factors that allow you to talk about the British system of preschool education as one of the best in the world. For 2 years, children prepare for school and at the age of 7 they are sent to the primary school where education lasts up to 11. Further education continues at the junior school and the duration of studies is up to 13. Studying at primary school and junior school is considered compulsory for all.

Primary School and Junior School contain exam systems, which are now replaced by a standardized test. The results of both exams are required to go to the secondary school stage. After finishing the Junior School all students take the Common Entrance Examinations (general entrance exam). This exam is also called “13+.” Students will be tested in the following subjects: [2]

- Mathematics (mental test, counting with a calculator, counting without a calculator)
- English (International, UK)
- Latin alphabet,
- Greek alphabet,
- Welsh Language (Wales for public schools)
- Irish (for public schools of Northern Ireland)
- Geogrphy,
- History,
- Religion,
- Physics, Chemistry or Biology or other science;
- Foreign language of your choice (French, German, Chinese, Spanish).

The results of this examination give an opportunity for further education in the Junior School from ages 14 to 17. There is focused training to pass the final exam and receive a certificate of secondary education - GCSE - General Certificate of Secondary Education. The main school exam at the Certificate of Secondary Education (GCSE) is taken at the age of 16. If students pass it successfully, they have a choice: they can either go to college of further education in polytechnic school or continue their education in the sixth grade.

If the Junior School graduate chooses further education, it is required to have additional training in the world famous Boarding School. England is the first in the

world to open boarding schools, which focuses on the development of healthy and strong human qualities. They are the most popular institutions. Studying at such schools in the UK defines future circle of social contacts of the baby, it opens the doors to Oxford, Cambridge and other universities, where it is impossible to enter without a certificate of English school:

- A-level (highest level). Those who remain in school after GCSE study 2 more years to pass the advanced level exams “A” in two or three subjects, which is necessary for entering a British university. Universities usually select students on the results of “A-level” exam and interview.

A-levels are a two-year programs of preparation for university entrance. The presence of A-levels programs is a significant difference between the British education system and the Russian one. A-Levels courses involve the mandatory study of 4–5 subjects in the first year and another 3-4 subjects in the second year. At the end of each year students must take final exams. The examination process on courses differs from generally accepted standards. There are no strictly established subjects for the exam. A-levels allow student to choose subjects for study depending on the requirements of the university, which is the next step. Several exams at the end of A-levels will simultaneously be entrance ones to the desired university [1].

- IB (International Certificate). A student chooses 6 subjects, half of which are studied in greater depth. Duration is 2 years. At the end of the studies it is necessary to write an essay of 4000 words.

The usual higher education system begins by getting a Bachelor’s degree. This training lasts 3-4 years. Bachelors are educated for three years. In medical and architectural universities training lasts much longer. If students want to continue their education, they enter a Masters Degree program and study 1-2 years more. Magistracy in the UK is often highly specialized and academic one. More than that, higher education includes vocational training. All students in the UK must pay for their education. Local students take the privilege to pay, and foreigners pay the entire cost of study.

England is the country where the oldest European universities appeared. Oxford and Cambridge still retain their leading role in education and science. At the same time, the education system adopted in these universities is based on ancient traditions and differs significantly from other universities in the world [3]. Oxford and Cambridge universities are known worldwide and have the highest rating. In England, higher education has specific goals, structure and teaching methods and has an obvious elite character. The pursuit of elitism has never been hidden and even consolidated by a system of instructions and legislative acts - this is the formation of scientific, political and intellectual elite of world importance.

The entire system of British education is based on two major institutions: universities and colleges. The structure of English education lies in its versatility and in the fact that each of the universities comprises several colleges in which there are laboratories, business centers, and observatories. This is an essential

feature of British universities. The university has lecture halls, and the college provides students with accommodation and meals, and often grants.

The university has rest rooms where students can read newspapers, magazines and discuss the problems of science and teaching. Cambridge and Oxford give great opportunities for contacts of world scientists and educators [3].

The college appreciates the convenience provided to students and teachers. The college must have a library working around the clock. Any student or teacher can use computers and free access to the Internet.

Another problematic feature is the relationship between the university and the college, and this is a purely English problem, because in other universities there is no such system.

Colleges are engaged in selecting students from those who applied, they provide a tutoring system, recommend them lecture courses, and provide students with food and accommodation. Moreover, colleges organize the social life of students and their sports activities. Students pay colleges for academic assistance and housing. University tuition fees for all UK residents come from local government funds that provide grants for education, but only for those whose parents have little income.

As for graduate students, they have grants from the fund for research that cover their tuition fees and provide accommodation. The college is a democratic organization. College members are elected and divided into several groups, the most important among which are related to teaching and administration, as they provide college work. Many college members are university professors, and many university employees are college members [3].

Five best UK colleges:

1. CATS College London.
2. Cambridge Tutors College.
3. St Clares Oxford.
4. Bosworth Independent College.
5. Brooke House College.

Best universities in the UK:

1. University of Oxford.
2. University of Cambridge.
3. University of Surrey.
4. University College London.
5. Southampton University.

The English government supports students from other countries and is developing special internship programs for them. In addition, it employs graduates staying in England. For 2 years, a graduate may work in England according to his specialty. Thus, in England, secondary education is accessible to all, and university education is only to the few people. At the same time, it is that what the universities of Oxford and Cambridge are striving for, presenting themselves to the world as elite universities.

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MASTER'S PROGRAMS ABROAD

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In the modern world getting a master's degree is becoming increasingly relevant. Master programs in the Russian education system play a special part. The content of master's programs allows students to continue their education, to gain additional qualification in the chosen professional field, which provides a deeper level of proficiency in their profession. In addition, graduate students acquire practical skills, which significantly increases their competitiveness in the labor market.

For some students, a master's program is the next step towards a PhD program and eventually an academic career. For others, specialised postgraduate training helps link their undergraduate experience to specific career goals. Currently, master's programs are considered as a real alternative to the second higher education, therefore, those who want to totally change their field of activity and acquire a new specialization or get a second diploma in an adjacent specialty can go for a master degree.

In recent years, graduates of many Russian universities get their master's degree abroad, and that stands to reason.

The main advantages of foreign master's programs are the following:

- getting a prestigious foreign diploma;
- studying theoretical and practical experience in the chosen field in another country;
- training in international groups;
- obtaining practical skills in the relevant field of activity (for the period of internship);
- in-depth study of a foreign language [1], or perhaps two;
- acquisition of advanced knowledge and practical experience at the international level;
- the choice of the program, which is not yet available in Russian universities;

- internship in a foreign company;
- establishing professional contacts abroad.

Foreign countries offer a huge number of master's programs available for Russian graduates. Many universities provide their graduate students with a residence permit and the possibility to work during their studies (for example, in Slovenia). For some programs it is enough to know English, and not the official language of the country. One can find such programs in Germany, Italy, Sweden, Denmark, Spain, Holland, Belgium, the Czech Republic, Norway, Poland, etc. You can get information about the quality of education from all kinds of university ratings. The most influential of these are *Financial Times*, *Shanghai Ranking*, *QS World University Rankings*. In order to choose a specialized master's program, in addition to the general rankings of universities, it is necessary to study the university ranking by specialties. At the same time, there is a prevailing opinion about where to study in certain specialties in order to gain maximum competencies. For example, US universities have the best programs in the world in IT, finance and business, German universities - in the field of engineering, Italian universities - in the field of fashion and design. Swiss colleges and universities are known for their training in the field of hotel management and the hospitality industry.

Admission requirements for a Master's degree abroad can vary from program to program, but luckily there are also many similarities. To apply for a master's program, one must confirm the level of knowledge of a foreign language, which a program will be taught in. For English-taught Master's universities will typically require official language certificates such as TOEFL, IELTS, for German-taught ones is TESTDAF or DSH. Universities in different countries have different requirements for the score of these certificates.

A wide range of English-taught master's programs are offered by state universities in Germany. But, unfortunately, they provide a very limited list of specialties. If you want to get a master's degree in another profession, you will have to study in German.

English-taught master's programs are not available for all specialties, but the choice is quite good: design art; IT technologies; applied Physics; financing; Accounting; tourist management; economy; hotel management; international relationships; marketing; business administration; right; politics.

When studying for free, one need to pay only health insurance (about 50-60 euros per month) and semester fees (up to 200 euros per semester). Accommodation, meals and other expenses are also paid by a student on his own.

A Russian graduate can also choose a fee-paying master's program. By the way, in all countries of the world there are special scholarship programs and grants for foreign students. Almost all universities have this information on their websites. These scholarships are able to cover all costs associated with tuition fees, accommodation and meals, and sometimes travel costs.

The most popular international programs are Fulbright (USA), Erasmus Mundus (EU countries), DAAD (Germany), CEEPUS (Central and Eastern

Europe), Chevening Scholarships (UK), Visby (Sweden), and there is also Global Education. The latter is a program for financing the training of citizens of the Russian Federation at leading foreign universities and helping to get employed. The main thing is to submit all the documents on time. Also there is still an opportunity to receive scholarships from universities themselves. You can learn more about this from the information posted on the websites of educational institutions.

After getting a master's degree, many students have an opportunity to find a job with the help of career centers located directly in universities, as well as job fairs that are often held there.

The following documents are required for applying for a master's degree:

- a Bachelor's diploma (a certified translated into English);
- Reference letters (from university professors or/and employers);
- Academic transcripts from your Bachelor's studies (courses, modules, grades);
- Motivation letter or statement of purpose;
- Curriculum Vitae;
- Language certificate: TestDAF / DSH / IELTS / TOEFL
- Portfolio (when applying for creative specialties).

In some universities, it is also advisable to write a statement for getting a scholarship. In essence, this is another motivation letter explaining why a scholarship is needed so that one will be able to take part in a scholarship competition in the university itself.

Many universities provide online pre-register to fill out and send a questionnaire and scanned copies of documents, which often does not change the fact to send the same documents by mail. Best of all - by registered mail or express mail (DHL, UPS). You can apply for several programs and universities.

If an applicant has passed the pre-selection stage successfully he can be invited for an admissions interview, which is quite possible to be held by phone or Skype.

The motivation letter and the interview are extremely important, so they should be taken really seriously because it can be a truly pivotal moment in their admission.

Studying for a master's degree abroad differs from that of in Russia. The volume of practical training is minimal, the emphasis is on maximizing the independent work of students. All disciplines are chosen by a student. To obtain a diploma, you must score a certain number of points for the entire period of study. All teachers have experience in the external labor market and are selected as a result of competitive selection.

Summing up, it is safe to say that studying for a master's degree abroad is more than possible for Russian students both fee-paying and free of charge. A master's degree abroad is a great chance not only to get an excellent education, but also to live in another country, enhance language skills, boost your CV, take in a new culture, and gain independence.

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THE USA AND THE UK: MAIN EDUCATIONAL DIFFERENCES

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This article considers the distinguished peculiarities and main differences between educational systems in America and England. Both countries share a rich tradition of quality higher education, excellent research facilities, and a culture that promotes intellectualism as well as academic freedom. In this article, we will explore the primary differences between the American and British systems of education.

Education plays a huge role in the modern world. The formation of future self-supporting members of society depends on education. In our time more than ever before education is a priority for states. It is no secret that the rating of states is created by the percentage of citizens with higher education.

No doubt, each country has its own approaches to education and methods of studying of school curriculum. Every parent wants to give the best education to their children believing that it will pave the way for him to a great life. If we take into account that schools of England and the United States are considered the most prestigious, one can have a question – what their advantage is and how these countries differ in education.

It is worth noting that the mentality of people also affects education in the country. Foreign parents try to give their child to the nursery and kindergartens as soon as possible, the latter are called preparatory classes.

Today we will talk about the main differences between the British and American school education systems.

As for England, the system of education in the UK is regulated by the “Education Act” signed in 1944 for more than 70 years. This important document is more concerned school education, but it also highlights many aspects of the whole educational system. The English education system is considered to be one of

the best in the world. It combines excellent academic training, personal development and research skills. British schools and universities appreciate tradition but at the same time they quickly adapt to changes.

Education for children from 5 to 16 years is compulsory. Parents decide whether a child should study before the age of 5, and whether it is necessary to get an education after the age of 16 – is decided by the citizen himself. The system is so that students can reach some educational levels at one educational institution, while others require training in specialized institutions.

Let's start with preschool education. Pre-school education in the UK is an integral part of a full-time education school, and often kindergartens are part of primary schools. Children aged 3-4 years old can attend kindergartens or nurseries due to their parents' wishes. Kids are taught to write, read and count, develop them with the help of games. There are public and private pre-schools. British pre-school education is limited to the age of 2-7, but, in fact, most children are in the nursery from 2 to 4, then they are sent to primary school.

Parents need to pay for the services of a full-time kindergarten or otherwise they give the child to a free nursery, but they are only for 2-3 hours a day. The average cost of British pre-school education is significantly higher than in other European countries so the country provides parents with special credit programs.

There is also a primary school. In England, Wales and Northern Ireland primary education can start at different ages:

- from 4 to 11 (Primary School) with a 7-year period of study;
- from 7 to 13 (Junior School) with a 6-year period of study.

Experts believe that the Scottish system of formation of school groups is more flexible.

In primary school they study geography, history, mathematics, English, music, art and industrial technology. All these subjects in primary school are chosen by parents for their children.

Students in UK schools study 6 semesters or terms starting classes in September and ending in July. The school year lasts 38 weeks; there are also holidays of 2-3 weeks for Christmas and Easter holidays as well as 6 weeks in the summer. In the middle of each trimester children are given one more week break. In most cases, education in schools is 5 days a week.

Schools have their own examination systems. The Primary School is SATS, which is held 2 times: the first is in 2 years after the start of training and the second one is at the end of the educational stage. In Junior School there is an examination of the "11+" – it is the final of training. Both of these examinations are necessary for the transition from primary to secondary school. Primary school includes the study of about 10 subjects. First, children learn English, literature, mathematics. Natural Sciences, foreign languages, Humanities, exact and computer Sciences are added to them over time.

It is necessary to point out that primary school is more like a kindergarten. Children walk a lot; they are engaged in creativity and sports. The main emphasis is on socialization, development of communication skills, and formation of self-

confident, independent personality. At the age of 11-13 children go to secondary school and study there until the age of 17. At the age of 11 the child goes to secondary school and studies there until the age of 16. Here they are prepared to obtain a General certificate of GCSE (General Certificate of Secondary Education).

Getting secondary education in English schools gives a huge advantage when entering the University.

This period of study is also imperative for all UK citizens. Upon graduation students receive a GCSE (General Certificate of Secondary Education) – a certificate of secondary education. The country also has schools that issue GNVQ (General National Vocational Qualification) – a certificate of professional qualification.

Children of immigrants are enrolled into secondary school at the age of 11-13, but most of them studied at boarding school.

According to the results of the exam, students receive a pass to further education in secondary school. In the period of 14-17 students are preparing for the exams General Certificate of Secondary Education – this is the final check for a certificate of secondary education. The list of exam subjects is similar to the "13+" with the addition of several disciplines. From 11 to 14 children get the general curriculum and at the end they take a special exam: Common Entrance Examination. During this period students study 10-15 subjects and begin to take classes on vocational guidance.

From 14 to 16 students prepare for the final exams and at the end they take the GCSE exam. After that, they can go to work or continue training — to prepare for entering the University. If a student chooses to continue their education, he is preparing to enter the University and then he must take A-Level (Advanced Level Examinations).

Many American children go to and from school by the school bus, the route of which takes into account the accommodation of children in this town. Many parents bring their children to school and pick them up by car. If the parents are unable to pick up the child after school, he/she may, for an additional fee, attend an after-school group where he/she will be taught by the teachers to play educational games and help with homework.

In the US, unlike the UK, there is no national school system of education. Programs are different, much depends on the particular institution or state, so often school graduates have different levels of training. In the US, private schools are also popular as the level of training is much higher as well as the percentage of graduates entering higher educational institutions. American universities are divided into private and public. Both can be at different levels: along with the brilliant Yale and Harvard, there are a number of small and unremarkable schools. "Course of Sciences" there is much cheaper but the certificate isn't valued. A bachelor's degree provides four years of study in the United States.

While both countries provide a great education, each system has slight different approaches to education and there are advantages and disadvantages of each. If you consider getting your education in either the US or the UK, you should

take into consideration the various differences mentioned in this article, especially the amount of time, the tuition fees, etc.

Summing up, we would like to highlight the primary differences between the American and British systems of education.

Education Period

Perhaps the most important difference between the education system in the US, and the UK, is the amount of time it takes to finish your degree (except in Scotland, where a bachelor's degree also lasts four years). In general, degree programs in the US take about one year longer than programs in the UK, although this varies depending upon whether you receive a Master's degree prior to a PhD. In both systems, you can go directly to a PhD program out of your undergraduate program, but in the UK it is more common to complete a Master's degree program before moving on to a PhD. Courses of study are shorter in the UK because the course programs are generally much more focused than in the US.

Academic Term

Most universities in the US begin their terms in mid to late August, although smaller liberal arts colleges may start later. Most take a rather lengthy break beginning in mid-December and begin the second semester in early to mid-January. However, universities that are on different calendars, such as a trimester or quarter-based system, may begin their winter break at the Thanksgiving holiday, which falls at the end of November. The academic term in the UK is a bit more varied. While most also use the semester system, the trimester and quarter systems are used in some universities. Many schools start in September or October and end in May or June, making for a slightly longer academic year. However, the academic term is less standardized throughout the United Kingdom; if you choose to study there, your university might use a much different calendar.

University Organization

Many universities in the UK are made up of "colleges" which are dedicated to a specific subject matter. While the colleges are still governed by the university, each college has quite a lot of autonomy from each other as well as the university itself. You live with others in your college, eat with others from your college, and generally stay within your college for the duration of your studies. Rather than applying to the central university admissions department, like you do in the US, you either apply directly to the college of the subject you want to study, or in the case of undergraduate programs, you apply through a centralized system which allows you to apply to several colleges at once. This system is called the Universities and Colleges Admissions Service, or UCAS. This means that you have to know what you want to study before you even apply.

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INNOVATIVE TECHNOLOGIES IN TEACHING ENGLISH

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The purpose of teaching English is the communicative activity of students. In other words, it is a practical knowledge of English. There are many non-standard forms of teacher's work, activating attention and raising students' interest in learning English.

The modern world requires sufficient development in various fields of activity. Therefore, in order to be fully developed, humanity has entered the stage of innovative development.

For students a foreign language should become a reliable means of familiarizing with scientific and technical progress, a means of satisfying various interests academic ones. Therefore, it is imperative for students to expand and deepen the subject area through of cultural, general humanitarian or technical material oriented towards the future specialty of students. It should be provided familiarity with the elements of vocational guidance and retraining in the country of the language being studied, consideration of the peculiarities of the chosen profession and the role of a foreign language in mastering professional skills.

Currently, fundamentally new requirements for the training of specialists have been put forward. They must possess enterprise, the ability to make important decisions. The processes of globalization, the intensive development of communications, the Internet, distance education system are a basic requirement for modern workers to have a good knowledge of languages. Therefore, teaching English is considered as a necessary part in the general program of humanization of education.

Fluency in English is necessary both in everyday life and at work: relations with foreign partners, business trips abroad, modern equipment for manufacture, business negotiations. It is evident that everything requires knowledge of English.

Language, whether native or foreign, serves as a means of communication, allowing people to interact with each other.

Considerable success of the work depends on the teaching methods. The huge variety of activities of teachers and students in the classroom is the teaching methods.

In recent years, teaching methods which according to their content and ways of implementation are impossible without a high level of student activity are attracting more and more attention. Usually they are called “active learning methods”.

Among these methods the most common are didactic games. Didactic games are a collective, purposeful learning activity, when each participant and the team as a whole are united by solving the main task and orienting their behavior towards winning. A game organized for training purposes can be called a training game.

In terms of skilled workers and specialists training business games are widely used. Their goal is the formation and testing of specific skills to act in clearly defined situations. Students are trained to analyze the specified production conditions quickly, make optimal decisions, and solve economic problems.

The processes of renewal in the field of teaching English in modern schools create a situation in which teachers are given the right and opportunity to independently choose textbooks and other teaching aids. The use of cyberspace for educational purposes is an absolutely new direction of general didactics and private methodology as changes affect all aspects of the educational process ranging from the choice of methods and work style to the changing requirements for students' academic level.

The content basis of mass computerization of education is connected with the fact that a modern computer is an effective means of optimizing the conditions of mental work in general in any of its manifestations.

The main goal of learning English is the formation of communicative competence; all other goals (educational, educational, developmental ones) are realized in the process of implementing this main goal. Communicative approach involves learning to communicate and the formation of the ability to intercultural interaction.

Communicating in a true language environment provided by the Internet, students find themselves in real life situations. Involved in solving a wide range of meaningful, realistic, interesting and achievable tasks, students learn to respond spontaneously and adequately, which stimulates the creation of original statements, rather than routine manipulation of language formulas.

Priority is given to understanding, conveying content and expressing meaning, which motivates the study of the structure and vocabulary of the English language that serves this purpose. Thus, students' attention is focused on the use of forms rather than on themselves, and learning grammar is carried out indirectly, in direct communication excluding the mechanical study of grammatical rules.

The computer is loyal to the variety of students' answers, it does not accompany the work of students with laudatory or negative comments, which develops their independence and creates a favorable atmosphere in the classroom

giving them self-confidence which is an important factor for the development of individuality.

For the most successful orientation in the global information space, students need to master the information culture, since the priority in searching for information is increasingly given to the Internet. As an information system, the Internet offers its users a variety of information and resources. The basic set of services may include:

- Teleconferences;
- Video conferencing and webinars;
- Ability to publish your own information;
- Access to information resources.

A computer is a tool used by a teacher that can perform a variety of functions in the process of learning English:

- Training facility
- Tool for creating texts in the target language
- Means of communication with native speakers in the e-mail system

The main directions of the use of information and communication technologies of foreign language teachers are: multimedia lessons based on computer training programs, testing on computers, remote Olympiads, project activities and much more. Methodical forms of working with a computer during English classes can be different: mastering a new material or practical exercise by means of training programs, using translators when working with difficult texts.

The use of computer presentations in the educational process allows intensifying the assimilation of educational material by students and conducting classes at a qualitative level. The effectiveness of the impact of educational material on students depends largely on the degree and level of illustrative material. Computer presentations allow students to focus attention on significant points of the presented information and create visual effective images in the form of illustrations and diagrams.

Studying English with the use of information and communication technologies gives students the opportunity to take part in testing, contests, and competitions held on the Web.

The main purpose of teaching English in vocational schools is to train highly qualified specialists. Participation in various international programs, the opportunity to study abroad implies not only a high level of English proficiency, but also certain personality traits: interpersonal skills, the absence of a language barrier, knowledge of international standards, and a broad outlook. As a rule, when performing various tests entering a higher education institution or participating in competitions or olympiads, a strict time limit is set for the tasks, which also requires a special type of training. The use of modern learning tools, the introduction of active and interactive methods and the use of innovative technologies can solve these problems quite successfully.

Thus, we can safely say that Internet resources have great potential and can be very useful in teaching foreign languages. There are many training programs and

websites for learning foreign languages that we can use, and most of the training programs are free.

Today, the student, his personality, his unique inner world are in the center of attention. Therefore, the main goal of a modern teacher is to choose the methods and forms of organizing student learning activities that are relevant to the set goal, that is, to the personal development. Innovative forms of education contribute to the organization and enhancement of educational activities of schoolchildren and students, increase the effectiveness of training, and create a favorable microclimate in the English language classes.

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М.И. Мокшанкина

HIGHER EDUCATION SYSTEM IN THE USA

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The American higher education system is represented by universities and colleges. In the US, the concept of "university" in the usual sense does not exist - there are so-called "postsecondary schools" which includes both higher educational institutions and those that we used to refer to the average professional ones. In colloquial speech, Americans call all universities as colleges, even if they mean universities. The system of higher education in the United States includes a variety of types of educational organizations and is based on the following principles: flexibility of educational programs, their mobile adaptation to immediate social needs, the variety of forms of training, courses and programs, high democratic educational process, decentralized management of institutions, freedom of choice of student form and program of study. Along with the state universities there are also private ones which play a significant role in the US higher education system. Education is expensive and in both types but for especially gifted students there are special scholarships.

The US education system is characterized by flexibility and democracy: with a high variety of programs both schoolchildren and students themselves have the opportunity to choose the subjects being studied, as well as to change specialization. Even at the university, you can move from one department to another, study additional subjects and create your own educational program.

The motto of the Americans which expresses their attitude to education is “The more you learn, the more you earn”. In the US a well paid job requires a certain education. Comprehensive education gives you more chances to become better citizens. People with higher education have an advantage in the labor market. Therefore, not only young people, but also adults are becoming students in the USA. In 2016, for example, almost 20% of American college students were over 35 years old. And about 500 thousand are over 50. Almost 1/4 of Americans over the age of 25 are college graduates. College education is not an asset to the rich or talented. It is available for everyone. Now 15 million people are using this feature.

In the US, there are about 3,700 higher educational institutions. To choose an institution is difficult because of their large number. Information about institutions can be obtained from school counselors, from reference books, public libraries, on the Internet and in the schools themselves. Most higher educational institutions have their own websites, where there is information necessary to applicants. Many students attend many educational institutions, make excursions and talk with consultants. To make a decision, you need to consider the following questions if there is a right direction, probability to enter an educational institution, location and the cost of education.

The first stage of higher education (basic higher education):

Higher educational institutions are divided into:

- non-state (non-state institutions do not receive state funding);
- public (public institutions receive the support of the state in which they are located.);
- commercial institutions of higher education (Such institutions teach certain professional skills, and training in them is quite expensive) [2].

There are differences between colleges and universities. One of them is in size. In some colleges, the number of students ranges from several hundred to several thousands. And in some universities, more than 100,000 students are enrolled at several campuses. Universities are larger than colleges because they offer a wider range of educational programs. They provide more higher education and postgraduate programs. Many colleges are liberal arts colleges. They offer the study of such disciplines: literature, languages, mathematics, sociology and the humanities. Humanitarian universities usually do not offer a degree in engineering, business, journalism, pedagogy, etc. Some colleges prepare students for one particular specialty. For those who decided to build a military career, the government provides 4 military academies.

In colleges and universities the academic year lasts about 9 months. The college year is divided into 2 semesters or 3 terms. The grading system from the highest to the lowest consists of A, B, C, D, F. At the end of 4 years of study and successful passing of the final exam, graduates get bachelor's degrees.

The second stage of higher education (complete university education):

American universities offer 3 degrees of complete higher education: Master's degree (can be obtained after 1-2 years of study after obtaining the B.S. and B.A.

degrees); Ph.D (usually takes at least 3 years after receiving the Master's degree); professional degree.

Higher education financing:

The cost of training is different in institutions of various types:

- In expensive private colleges and universities, the annual cost may exceed \$ 30,000;

- State universities are much cheaper (~ \$ 6000);

- Tuition at community colleges averages about \$ 3,000.

The state is involved in providing financial support to those students who need it. There are three main types of financial assistance [5]:

- Scholarships and grants which are financial assistance that students do not need to return;

- Loans that are provided to parents and students on favourable terms;

- Working while studying which is provided to students throughout the academic year).

The most part of the financial support is aimed at those students who need it, and does not depend on academic success and achievements.

Each American college has departments for financial support, responsibilities of which include helping students find out what form of assistance they can rely on, as well as help in filling out difficult applications and processing the entire set of documents [1].

Unified exams and their application in higher education:

There are various standard tests that help applicants to show their knowledge to the Admissions Board in college. Adult applicants who for some reason have not completed high school can pass the GED (Test of General Education Development).

The GED includes five sections: composition, social studies, natural sciences, literature, art, and mathematics

These tests are available in English, French and Spanish. People who have successfully passed this exam receive a certificate of secondary education and can try to enter a college.

High school graduates who want to enroll in good colleges and universities pass uniform exams (ACTs and SATs.). These tests give applicants the opportunity to show how they will cope with the training. High school students can write these tests several times a year throughout the country.

Students for whom English is not their first language and those wishing to enroll in a higher educational institution will have to pass TOEFL (Test of English as a Foreign Language). Students can prepare for the language exam and other tests on special review courses or independently.

When students come to the USA, having mastered a part of the educational program in a higher educational institution in another country, they are required to submit an academic certificate with credits indicated in it. Students who fail to prove that they have completed a certain level of study at another college may pass a series of tests that are part of the CLEP (College Level Examination Program).

With the help of these tests, they can show their level of knowledge and prove their ability to study at an American college or university.

To enter magistracy and postgraduate studies, that is, to the second level of higher education, applicants must also take unified exams (tests). Explanations about the requirements and the necessary exam students can get in the counseling office of their school or the university that they would like to enroll. The presence of special preparatory courses, same textbooks and computer programs makes it easier for students to prepare for unified exams. The existence of a credit system allows students to transfer from one university to another, even if their university is located in another country.

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MODERN PROBLEMS OF LEARNING LANGUAGES IN RUSSIA

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There are many nations in our world that speak many languages. Some are considered difficult, some are simple. English is the international language. In Russia, the native language of all inhabitants is Russian. But for some reasons in Russia not so many people speak foreign languages as in other countries. So I want to understand this question and find out whether Russia is really lagging behind in language skills and what the reason is.

According to the 2002 All-Russian Population Census, residents of Russia speak more than 150 languages. Less than 10 thousand people speak most of these languages, many of whom are on the verge of extinction. 57% of Russians speak a foreign language at an elementary language level. In fact, most people speak English, the total is 38%. Then is German, which is close to 19%. Only 3% of Russians can speak French. It is even rarer to meet Spanish speaking person.

But the truth is that we should not exaggerate the level of our knowledge. A third of Russians can express themselves only in a non-native dialect. They can use only a few words. Actually they are literally beginners. But every twentieth person can speak English fluently without any problems. The intermediate level is enough clear for 16% but the advanced one is comfortable for 3 % [1].

What about foreign countries' statistics? For example in Germany 51% of the population speak English; 15% can speak French; only 5% of people know

Russian; 2.1 million people can speak Turkish and 612, 000 people know Italian [2].

There are many languages with different degrees of distribution and different status in the United States. For example, the vast majority of the population (82% or 231 million) can speak English. Spanish is spoken by 10.7% or 30.14 million. Chinese is spoken by 5% of all people living in America. People who speak French and German have about the same amount: 0.6% and 0.5% respectively, which is almost 1.5 million [3].

As we can see, the main problem is with the English language learning. In Russia we have the lowest indicators. According to the data, Russia has a low level of English ranking 36th in the index next to China (37), Brazil (38), Mexico (39), and Ukraine (44) [5].

Well, what is the cause of this problem? Russian education is subdivided into general education, vocational education, the provision of education and vocational training ensuring the possibility of implementing the right to education throughout life (continuing education). “Fifty-seven percent of Russians believe that students are overloaded with studies, according to a survey published by the independent Levada Center pollster. Twenty-nine percent said that foreign languages are the top priority of Russian schools, while 51 percent said schools preferred focusing on Russian language studies” [4]. The vast majority of respondents (92 percent) think children should study foreign languages in school. According to currently available statistics, the number of schoolchildren studying English in school is as high as 98%, especially in Russia’s biggest cities – Moscow and St. Petersburg [5].

Approximately 90% of all students (children and adults) somehow learned English and had complexes against this background. But nonetheless they try and try again to get down to business. What is the reason for such a small percentage of English language knowledge? I think it is due to the fact that the government has the wrong priorities in some fields. Because of the education system which is clearly inferior to foreign ones we lose good teachers. They have low salaries and I believe they are not motivated enough to offer advanced knowledge. Of course, you can contact private English language schools, where you will be taught by highly qualified teachers or even native speakers. But it is expensive, and not everyone, unfortunately, can afford it.

We can see that there are many people who can’t afford to buy even large household appliances. Actually, modern views on education are wrong in a number of ways. First of all, when school and education itself are seen as a service market, this does not lead to anything good. The student forms the idea that the teacher is his service provider. He should be ready to work with an electronic diary. The teacher is forming the idea that he should be only a trained student for the Unified State Exam. Eventually, everyone suffers – a teacher, a student and parents. In this case, there is no need to turn into a “provider of educational services”. Besides, all students learn from different textbooks. It brings chaos and confusion.

Perhaps the problem is that Russians speak foreign languages because of their complexity. Compare Russian with the most common language in the world –

English. There are many more words in Russian that can express the same meaning in different ways reflecting the speaker's emotions, his attitude to the object or phenomenon, etc. up to his social status which is much less common in English. There are no cases in English. But in the Russian language there are six cases, but we also need to learn how they are used, as well as declension, conjugation and much more. There are no such grammar phenomena in the English language. Punctuation in Russian can drastically change the meaning of what has been said. In English, it is not so important. In English, there is almost always a strict word order in a sentence, but in Russian, on the contrary, it is possible to put words in any order, and this will change the "tinge" of what is said and what is emphasized.

There are 12 tenses in English while in Russian there are only 3 of them. As for the verbs, they are the main wealth of the English language. There is a huge amount of verbs. But the worst thing is not the number, but the fact that there are irregular verbs. As for prepositions, there is nothing complicated in this phenomenon, just some of them do not coincide with the use of prepositions in Russian. This makes learning process a little bit difficult, but nothing more. As you can see, our native language is more complex and difficult than English.

Could it be harder for Russians to learn foreign languages than other Europeans? It is easy for a French person to learn Spanish because it is one and the same language family. Russian is not close to the most popular languages. The Slavic branch is divided into three groups of languages: East Slavic (Russian, Ukrainian and Belarusian), South Slavic (Bulgarian, Serbian, Croatian, etc.) and West Slavic (Czech, Slovak, Polish, etc.) [7]. There are common Slavic roots. Sometimes they are modified and become recognizable only for linguists. Sometimes they are quite obvious to most native speakers. Slavic languages are usually not "in demand", and therefore, even if Russians can learn them easily, they don't have any use for them. Russian people have much more difficulties to learn English which is in great demand at the international level.

As for young people, they often put off language learning. According to the research by the Guardian and British Academy, the main reason for young people doing it is because they think it is too difficult. This is despite the fact that most of them agree that languages can be useful for careers, understanding cultures and meeting new people.

Thus, we have a number of problems such as wrong education system principles, wrong social attitudes, lack of resources (we do not have enough money to employ a native speaker as a private teacher) and large differences between foreign languages and Russian. So, what are some possible solutions to these problems?

It seems to me that we must coordinate the system of Russian education. First, we must make certain subjects compulsory. From my own experience I can safely state that most students will say "thank you" because they may pursue the more intensive study of certain subjects, for example, English. That is, we can increase the number of hours we spend studying other languages. Second, we can refuse to take a Unified State Examination. This is the way your abilities and knowledge are

virtually ignored. It is important to think and write according to a given pattern. This exam discourages the desire to learn something new and useful. And, of course, we must improve the qualifications of teachers. I suggest that they should get an internship abroad. We must communicate with native speakers, and they must create the best conditions for learning.

To change people's preferences, you need to organize many international forums so that people can communicate without problems as well as to increase funding for exchange programs in Russian universities and schools. I think the main thing is to motivate people to learn a foreign language in order to solve all the social relations problems.

That it is important to develop the economy in order to finance schools and universities so that people can afford a decent education is evident to all. I believe that to make language learning more accessible, it is necessary to open free schools that will be funded by the state. Of course, you need to attract foreign teachers if you want to increasingly involve students in the language environment, so it will be easier and faster to learn English. Perhaps you need to create grants and awards for special achievements in learning languages. It can motivate people to study.

We cannot rebuild the language itself. So it would be easier to learn a foreign language if you started learning it earlier. I think parents should speak two languages with their child from birth. It also helps broaden his worldview. Such children are called bilingual.

In conclusion, I want to add that there is a problem of linguistics in Russia. And it is a serious one. We need to solve this problem and develop our education system (in particular, language skills). I would like to highlight that language learning is a very useful and fascinating process. Such knowledge will help you communicate freely with people from other countries. This will allow you to go on vacation or on a business trip. Language learning is very interesting and helps to develop expressive and creative abilities to the individual's full capacity.

СЕКЦИЯ «ВОПРОСЫ ИЗУЧЕНИЯ ИНОЯЗЫЧНОЙ КУЛЬТУРЫ»

А.И. Арзамасцева

THE MOST CREATIVE GENIUS OF AMERICAN ARCHITECTURE – FRANK LLOYD WRIGHT

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Frank Lloyd Wright was one of the greatest architects of the twentieth century. He created “organic architecture”. He was promoting open plan of buildings. His “Prairie style” became the basis of 20th century residential design in the United States. The British Encyclopedia calls him the most abundantly creative genius of American architecture. He was the author of 363 projects around the world. The densest concentration of his buildings is situated in Oak Park in Illinois.

Frank Lloyd Wright wasn't just a great architect. He was also an unbelievably bright person who wasn't afraid of speaking his mind. It needs to be mentioned that his appreciation of architecture was outshone only by his appreciation of himself. This means that the great architect left us not only many (363!) buildings, but many fabulous, still perfectly relevant quotes – clearly a genius far ahead of his time. And a person with every right to tell it like it is.

I want to give some examples of his quotes:

“Early in life I had to choose between honest and hypocritical humility... I chose the former and have seen no reason to change”.

“A doctor can bury his mistakes but an architect can only advise his clients to plant vines”.

“Regard it just as desirable to build a chicken house as to build a cathedral”.

“Why, I just shake the buildings out of my sleeves” (when people question the value of architects) [1].

It can be said that he used promoting words with infinite flexibility.

As we have already said, he championed “organic architecture”. This means, that he thought buildings have to grow naturally from their terrain.

When he gave a lecture in Moscow, he often talked about the “democratic” nature of his designs and ideas, proposing that the Soviet Union was an ideal place to realize them. He railed against the huge ambitions of other architects. Like the situation, when someone presented himself as “the only one who can show all of us the true way”.

Many people say that Frank Lloyd Wright is the greatest American architect of all time. He was born 152 years ago today (2019). The mastermind of more than 500 projects realized worldwide, he's remembered as an architect who elegantly blended nature with the built environment.

Now we need to mention more famous and significant buildings Frank Lloyd Wright created. We will say something about the history of this buildings and

something about the personality and life of the great architect who was a very conflicting person.

1910 Robie House (Chicago, Illinois)

In 1909, Frank Lloyd Wright left his wife and six children. In Europe, he met his lover, Martha “Mama” Cheney, who had left her American husband to join him. Having arrived in Germany, Wright organized the publication of the Wasmuth Portfolio. It was 100 lithographs of his work to date. This was a revelation to the first generation of European modern architects. There is a legend that work stopped for a day in the Berlin office of Peter Behrens, where the architect's young assistants, Ludwig Mies van der Rohe, Walter Gropius and Le Corbusier, pored over a first edition. Don't forget, they would become the greatest architects of 20th century.

Wright's Prairie Houses were special and modern: they have open plan floors, ribbon windows, low roofs and long horizontal lines. The most impressive of these was completed by Wright's first assistant, Marion Mahony, and interior designer George Mann Niedecken for a Chicago businessman called Frederick C. Robie. So, it was named Robie House. It was very advanced: it had a steel frame and brick skin. It became a US National Historic Landmark in 1957 and it has been under threat of removal twice: in 1941 and in 1957, both times by the Chicago Theological Seminary which was its owner since 1926.

“It all goes to show”, said Wright, “the danger of entrusting anything spiritual to the clergy”. [2, c. 94]

Now it is in its original condition and embodies the spirit of an original and totally American architecture independent of European influence.

1923 Imperial Hotel (Tokyo, Japan)

Wright's flight to Europe turned into a scandal and ensured the architect was without commissions for several years. And, worse still, in 1914 Martha “Mam” Cheney and her children were murdered by a male servant in the Wisconsin house that was built by Frank Lloyd Wright.

The commission to design the new Imperial Hotel in Tokyo came as the architect's rescue. Wright visited this city many times, creating courtyard buildings. He also was a collector of Japanese prints.

So, the hotel was a temple-like building, in which Eastern and Western themes are mixed. It was completed in 1923 by the architect's assistant Arata Endo. Frank Lloyd Wright said, this is a quiet hotel with a system of gardens: usual, sunken and terraced, in balconies, loggias and roofs.

Wright's team was replenished with two young Japanese architects – Kameki and Nobuko Tsuchiura. It needs to be mentioned that Nobuko was the first female Japanese architect.

Anyway, Imperial floated on a mud plain. And it was partly destroyed by incendiary bombs of the USA Air Force. Also, it was occupied by American forces from 1945 to 1952. By the 1960s it had sunk deeper into the ground and in 1968 it was demolished.

If it existed today, this would surely be one of the world's cult hotels.

1939 Fallingwater (Fayette County, Pennsylvania)

Wright's career stalled. Why? Firstly, the effects of the Great Depression. Secondly, the growing influence of young architects of the Bauhaus movement.

Only in 1934 did the architect receive an order: to design a weekend mountain retreat overlooking the waterfall at Bear Run in the Laurel Highlands 65 miles southeast of the city. The customer was Pittsburg department store proprietor, Edgar J. Kaufmann.

Wright wrote to Kaufmann and his wife, Liliane, that he wanted Kaufmanns to live with the waterfall, not just to look at it.

The result was a highly original and beautiful house set directly over the waterfall. It was modern, but belonged to the landscape. A daring structure, its cantilevered riverfront sagged the moment the concrete formwork was removed, while damp seeping up from the waterfall - accessible by stair from the living room - caused mold as roof-lights leaked.

It is so hard not to fall in love with Fallingwater. By the way, its name can be shortened to "FLW" – Fallingwater, or... Frank Lloyd Wright. The influential magazine – Time – described the house as the architect's most beautiful job. Wright was on the up again. It was a museum since 1964 and in danger of collapse by the end of the century.

1959 The Solomon R. Guggenheim Museum (New York, USA)

Dreamed up in the middle of 1940s, Wright's designs of Guggenheim – his only museum – were opposed to rectilinear modern European architecture, dominating in New York architecture and cities worldwide from the end of the Second World War.

The structure of the museum is spiritual, shell-like. It was a more personal architectural statement rather than some rational analysis of functions expressed in a grid of 90-degree angles.

It's opening took place six months after Wright's death at the age of 91. The architect had never stopped working. And Guggenheim was loved and hated. Those who loved it enjoyed its sense of freedom and fearlessness, its radical architectural breaking from that of usual museums and galleries. Those who hated it were against its contrary design. How could curators be expected to hang paintings to visitors along the walls of a continuously ascending or descending spiral? When curators asked about the low ceilings, it is said that Wright told them to cut the paintings in half.

The Guggenheim endeared Wright to New York's media. In June 1956, he even appeared on the popular TV quiz show "What's My Line". In September 1956, he twice was the subject of "The Mike Wallace Interview" sponsored by Philip Morris.

Wright had become an American legend. He remained, though, a fierce individualist, ever refusing to join the American Institute of Architects.

1956 The Illinois (unrealized)

In October 1956, at the press conference at Chicago's Hotel Sherman, Frank Lloyd Wright unveiled his design for The Illinois. It should have been a

sensational mile-high skyscraper, the tallest of all skyscrapers. It should have been placed in green Chicago parkland.

The 528-floor tower, with its twin helipads and 56 atomic-powered elevators, however, remained a dream, although it proved that Wright had become ever more radical with age, and that he was, as he had been since he first promoted his Prairie Houses, still a highly talented publicist.

Conclusion

Wright has been described again as narcissistic and egotistical person. He was, though, an exceptionally talented architect, and never doubted this, even in the face of personal loss and downright tragedy.

Wright was a great creator and a highly productive architect. He designed some 800 buildings, 380 of which were built, and about 280 are still standing.

All of his career he used ornamental details, earthy colors and rich textural effects.

He became famous as the creator and expounder of “organic architecture”, his phrase indicating buildings that harmonize both with their inhabitants and with their environment. The boldness and fertility of his imagination and his command of space are probably his greatest achievements.

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DEN TIERSCHUTZVEREIN FÜR BERLIN

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Wir über uns

Tiere haben seit 1841 in Berlin eine zuverlässige Stimme, wenn es darum geht, für ihre Rechte zu kämpfen: den Tierschutzverein für Berlin und Umgebung Corporation e.V. Mit dem Tierheim in Hohenschönhausen-Falkenberg schuf der Tierschutz-Verein für Berlin eine der größten und modernsten Einrichtungen dieser Art weltweit. Hier werden jedes Jahr rund 12.000 Tiere aufgenommen, betreut und vermittelt. Tiermediziner versorgen in Not geratene Haus- und Wildtiere. Wenn Polizeibeamte oder Mitarbeiter des amtlichen Tierfangs auf herrenlose oder entlaufene Tiere treffen, bringen sie sie in die Tiersammelstelle des Landes Berlin. Hier finden die Tiere eine Bleibe, bevor sie in die Vermittlungsboxen des Tierheims umziehen. Der Verein macht in der Öffentlichkeit mit Hilfe von Kampagnen auf seine Arbeit aufmerksam. Er kämpft gegen qualvolle Experimente an Tieren genauso wie gegen die Zucht von Pelztieren oder die leidvollen Nutztiertransporte.[2]

Geschichte

Der Tierschutzverein für Berlin ist ein Verein mit langer Tradition. Als der preußische Beamte C. J. Gerlach 1841 auf dem Mühlendamm Zeuge der Misshandlung eines Kutschpferdes wurde, gründete er den „Verein gegen Tierquälerei“. Das Ziel war schon damals, „Grausamkeiten gegen Tiere mit Hilfe aller zu Gebote stehender Mittel zu verhindern“. Doch Tierschutzarbeit ist ohne einen Ort, an dem man die gequälten und heimatlosen Kreaturen vorübergehend unterbringen kann, kaum denkbar. Und so wurde im Jahre 1901 auf einem großzügigen Gelände an der Dessauerstraße Deutschlands erstes Tierheim, das Tierheim Lankwitz, eingeweiht. 2001 wurde der Neubau am Hausvaterweg 39 in Falkenberg eröffnet.[2] Dort befindet sich auch die Geschäftsstelle des Tierschutzvereins. Neben der Betreuung der besitzerlosen Tiere hat der Tierschutzverein im Laufe seiner Geschichte auch immer wieder gegen Tierquälerei mobil gemacht und ist für die Rechte der Tiere auf die Straße gegangen. Zu den jüngsten Erfolgen zählt der gemeinsam mit dem Deutschen Tierschutzbund geführte Kampf gegen Subventionen für Tiertransporte sowie die erfolgreiche Abwendung der geplanten Affenversuche an der Berliner Charité. Aktuell ist derzeit die Kampagne gegen die Käfighaltung von Legehennen.[3]

Verbandsklage für Tierschutzvereine auf Landes- und Bundesebene

Das Staatsziel Tierschutz muss sich endlich im Alltag niederschlagen. Der Tierschutzverein für Berlin und Umgebung Corp. e.V. fordert die Einführung des Verbandsklagerechts für anerkannte, gemeinnützige Tierschutzorganisationen auf Landes- und Bundesebene und erwartet vom Berliner Senat entsprechende Initiativen im Bundesrat. Wir fordern eine umfassende Novellierung des

Tierschutzgesetzes, indem das Staatsziel Tierschutz endlich berücksichtigt wird.
[2]

Auch hier muss das Land Berlin in den Gremien eine Vorreiterrolle einnehmen.

Bislang bildet der Tierschutz im Unterricht nur eine kleine Rolle durch Unterstützung des Tierschutzvereins für Berlin. Doch bereits in der Ausbildung der Lehrer sowie bei der Fort- und Weiterbildung soll das Thema einen festen Platz erhalten. Auch soll Tierschutz ein zentraler Bestandteil des Unterrichts werden. Tiere in Not haben in Berlin eine schwache Lobby. Vor allem Polizei, Feuerwehr und Ordnungsämter tun sich immer wieder schwer, wenn es um Tiere in Notlagen geht. Die Zuständigkeiten sind klar geregelt. Mangelnde Information und eine Vielzahl von Missverständnissen führen dazu, dass die Behörden beim Vollzug von Tierschutz häufig überfordert und hilflos sind. Abhilfe könnte ein Runder Tisch Tierschutz schaffen, bei dem alle Beteiligten die Situation erörtern. Ziel sollte ein Leitfaden im Umgang mit Tieren sein, welcher neben den Zuständigkeiten auch regelt, wer die Kosten trägt.[2]

Keine Wildtiere in Zirkussen

Berlin ist ein begehrter Gastspielort für Zirkusse. Jedes Jahr kommen mehrere Dutzend von ihnen an die Spree. Nur wenige verzichten inzwischen auf den Einsatz von Tieren. Die meisten führen Wärme liebende, nicht heimische Tiere wie Elefanten, Giraffen, Nashörner, Flusspferde oder Kamele mit sich. Der Tierschutzverein für Berlin und Umgebung Corp. e.V. fordert von allen zwölf Berliner Bezirken ein klares Nein zum Zirkus mit Wildtieren. Wer mit Wildtieren Auftritte plant, dem sollte dies generell auf öffentlichen Flächen und Plätzen verboten werden. Darüber hinaus ist der Senat von Berlin aufgerufen, ein Verbot von Wildtieren in Zirkussen zu erlassen. Helfen Sie mit Ihrer Unterschrift, Wildtiere in Zirkussen zu verbieten![2]

Tierversuche abschaffen - Alternativen fördern

Ausführlicher Bericht der Veranstaltung von 2017 und Themenaufstellung der vergangenen Jahre Zukunft ohne Tierversuche – wird Berlin Forschungshauptstadt der Ersatzmethoden? Zu diesem Thema veranstaltete der Tierschutzverein am 24. April 2017 eine große Diskussionsrunde in der Urania Berlin. Anlass war der Internationale Tag des Versuchstieres, der seit 1979 weltweit am 24. April begangen wird. Damit fand in der Urania zum sechsten Mal unsere Veranstaltungsreihe unter dem Motto „Forschung JA – Tierversuche NEIN!“ statt. Wieder war der Veranstaltungsraum mit ca. 200 Teilnehmern aus Wissenschaft, Politik, mit Tierschützer/innen und anderen Interessierten gut gefüllt.[1]

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DEUTSCHE ENTLEHNUNGEN IN DER RUSSISCHEN SPRACHE

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Einleitung

In seiner Sprachgeschichte hat das Russische wechselnde Kontaktrollen als Objekt und Subjekt übernommen. Zum einen handelt es sich um Kontakte des Russischen zu anderen Sprachen, wobei Fremdeinflüsse von diesen Gebersprachen auf das Russische als Rezipienten gerichtet sind. Zum anderen hat das Russische selbst die Rolle der Gebersprache gespielt. In dieser Arbeit wird das Russische als rezipierende Sprache untersucht.

Ziele der Arbeit: hier werden Entlehnungen aus dem Deutschen analysiert.

Entlehnung

Übernahme oder Überführung eines Sinnbilds aus einer Sprache in eine andere, Bereicherung des Wortbestands einer Sprache, durch den Wortbestand einer anderen Sprache, oder Transfer lexikalischen Materials oder grammatischen Konstruktionen - diese Vorgänge werden Entlehnung genannt. Es werden nicht nur Begriffe für die neu eingeführten Gegenstände, Technik, Erkenntnisse in Wissenschaft usw. entlehnt, sondern es können auch Dubletten schon vorhandener Beziehungen erscheinen.

Fremdwort

Ein aus einer fremden Sprache in die Muttersprache übernommener sprachlicher Ausdruck wird Fremdwort genannt. Man kann ein Fremdwort als nicht assimiliertes Lehnwort bezeichnen. Sehr häufig trennen nur geringe Unterschiede Lehn- und Fremdwörter voneinander. Als Kriterien zur Abgrenzung gegenüber Lehnwörtern gelten:

- a) die „fremde“ morphophonematische Struktur;
- b) die Häufigkeit oder die Vertrautheit des Sprechers mit dem Begriff;
- c) die orthographische Repräsentation;

In der russischen Wissenschaftsliteratur und in Lexika wird nicht streng zwischen Begriffen «Fremdwort» oder «Entlehnung» unterschieden.

Germanismus

Den Begriff Germanismus findet man in der russischen wissenschaftlichen Diskussion, wenn es um den Einfluss der deutschen Sprache auf andere Sprachen geht.

Der Duden bezeichnet Germanismus ebenfalls als:

- 1) Entlehnung aus dem Deutschen in eine andere Sprache;
- 2) sprachliche Besonderheit des Deutschen [1].

Germanismen im Russischen

Germanismen im Russischen A - B

absaz (абзац) = Absatz

aisberg (айсберг) = Eisberg

anschlag (аншлаг) = Anschlag im Theater: ausverkauft

bruderschaft (брудершафт) = Bruderschaft

burgomistr (бургомистр) = Bürgermeister

buterbrod (бутерброд) = belegtes Brot (mit oder ohne Butter, also eine Stulle, nicht aber ein Butterbrot)

Germanismen im Russischen D - G

diesel (дизель) = Diesel

endschpil (эндшпиль) (Endspiel)

fal'sch (фальшь); fal'schiwuj (фальшивый) = Falschheit; falsch, gefälscht

fljaschka (фляжка) = kleine Metallflasche

gastarbajter (гастарбайтер) = Gastarbeiter

grunt (грунт) = Grund, Boden

Germanismen im Russischen J - L

jarmarka (ярмарка) = Jahrmarkt; Messe

jeger' (егерь) = Förster, Jäger

kapel'mejster (капельмейстер) = Kapellmeister, Dirigent

kartofel (картофель) = Kartoffeln

kurort (курорт) = Kurort

landschaft (ландшафт) = Landschaft

Germanismen im Russischen M - P

matraz (матрац) = Matratze

mjusli (мюсли) = Müsli

punkt (пункт) = Stelle, Punkt

Germanismen im Russischen R- S

rjuksak (рюкзак) = Rucksack

schlagbaum (шлагбаум) = Schlagbaum, Schranke

schlang (шланг) = Schlauch (von Schlange)

schljager (шлягер) = Schlager

schnizel' (шницель) = Schnitzel, auch Boulette

schpriz (шприц) = Spritze

Germanismen im Russischen T - Z

wachtjor (вахтёр) = Wächter

weksel' (вексель) = Wechsel, Schuldverschreibung

werf' (верфь) = Werft

wunderkind (вундеркинд) = Wunderkind

zejtnot (цейтнот) = Zeitnot

zement (цемент) = Zement

Lehnwörter

Фейерверк – der Feuerwerk

Das Wort kommt aus dem Deutschen. Das Wort bedeutet im Russischen: цветные огни, получаемые при сжигании различных пороховых составов.

Feuerwerk = Pulver, Geschützmunition: durch das Abbrennen von Feuerwerkskörpern hervorgebrachte Lichteffekte (am Nachthimmel).

Бухгалтер – der Buchhalter

Das Wort der Buchhalter – бухгалтер wurde vom Wort das Buch - «книга» und halten «держатъ» gebildet. Das Wort bedeutet im Russischen: специалист по бухгалтерии.

Buchhalter, der die Geschäfts-, Rechnungsbücher eines Betriebes führt.

Гастарбайтер – der Gastarbeiter

Das Wort kommt aus dem Deutschen. Es besteht aus 2 Vokabeln (der Gast—гость, + der Arbeiter- рабочий).

Das Wort bedeutet im Russischen: рабочий, который временно работает в другой стране по найму.

Arbeiter, der für eine gewisse Zeit in einem für ihn fremden Land arbeitet [2].

Schlusswort

In den Entlehnungen der deutschen Wörter im Russischen wurde die Geschichte unseres Volkes reflektiert. Viele geliehene Wörter aus der deutschen Sprache sind so fest in die alltägliche russische Sprache eingegangen, dass sie anscheinend immer Russisch waren.

Der Prozess der Entlehnungen in der Sprache ist ununterbrochen, da das russische Volk weiterhin im wirtschaftlichen, politischen, kulturellen, wissenschaftlich-technischen Kontakt mit den Völkern anderer Länder lebt. Wenn Sie ein geliehenes Wort intelligent verwenden, bereichert es unsere Sprache und macht sie ausdrucksstärker [3].

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BESONDERHEIT DER DEUTSCHEN MENTALITÄT

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Es gibt viele Mythen und Stereotypen über die deutsche Mentalität. Auf der ganzen Welt gelten Deutsche als pünktliche und vernünftige Menschen. Eine solche Verallgemeinerung ist jedoch manchmal falsch. Z.B. unterscheiden sich die Menschen im Norden des Landes von denen, die im Süden des Landes leben, in ihrem Verhalten, ihrer Sprache und sogar im Alltagsleben.

Deutsche lieben es, die Wahrheit zu sagen. Geradheit ist die nationale Eigenschaft aller in Deutschland Geborenen. Überraschenderweise erwarten die Deutschen nicht dasselbe von Vertretern anderer Nationalitäten. Deutschland ist extrem tolerant gegenüber Menschen anderer ethnischer Gruppen. Vielleicht liegt dies an der Erinnerung an den Zweiten Weltkrieg oder daran, dass sich die Deutschen als ziemlich fortschrittlich bezeichnen.

Die Kommunikation zwischen zwei Freunden in Deutschland erfolgt ohne Andeutungen und Halbtöne. Deutsche vertrauen sich nicht Fremden an. Sie kümmern sich im Allgemeinen um die Privatsphäre anderer.

Pünktlichkeit ist ein gemeinsames Merkmal der gesamten deutschen Bevölkerung. Verspätung zur Arbeit ist eine ernste Straftat und führt wahrscheinlich zu einer Geldstrafe. Wenn unüberwindliche Umstände wie Staus, Fahrzeugausfälle oder verspätete Intercity-Züge die Verspätung verursacht haben, werden die Deutschen die Verspätung nicht für seine Aktion verantwortlich machen. Wenn jedoch eine Person mindestens 10 Minuten später zur Arbeit kommt, weil sie die Nacht in der Bar verbracht hat, kann dies zu öffentlicher Zensur führen.

In den Häusern und Geschäftsstellen Deutschlands hat jede Sache ihren eigenen Platz. Sogar ein einfacher Löffel hat einen separaten Haken, und wenn jemand ihn daneben stellt und nicht an die Wand hängt, wird er als unauffälliger Mensch betrachtet. Der Wunsch der Deutschen nach Ordnung ist allen bekannt, Die Behälter für die Mülltrennung, das Lagersystem und die Sorge um die Umwelt ist für sie üblich. Junge Menschen in Deutschland schließen sich häufig verschiedenen Gruppen an, die für eine sauberere Umwelt kämpfen. Aufgrund des Wunsches, in den deutschen Häusern zu bestellen, gibt es ein notwendiges Möbelset und es ist schwierig, etwas Besonderes zu finden. Manchmal wirkt die Einstellung etwas unangenehm. Diese Situation entsteht aufgrund des Rationalismus der Deutschen. Sie geben kein Geld für teure Kleidung oder Luxusartikel aus. Und sie sind es gewohnt, mit allem Notwendigen zufrieden zu sein und funktionale Haushaltsartikel zu wählen.

Die Gesundheit und die Arbeitsstelle sind für jeden Bürger Deutschlands wichtige Werte. Der Erfolg einer Karriere hängt nicht nur von den intellektuellen Fähigkeiten ab, sondern auch von den körperlichen Fähigkeiten einer Person. Deshalb versuchen viele Deutsche, einen gesunden Lebensstil zu führen. Nie selbst behandeln. Kaum geniest, bemühen sie sich, so schnell wie möglich einen Termin für einen Arzt zu vereinbaren. Die Einnahme von Medikamenten ohne Rezept in Deutschland wird nicht akzeptiert.

Jede Arbeit in diesem Land gilt als würdiger Beruf. Manchmal kann ein einfacher Hausmeister mehr als ein Büroangestellter bekommen. Die Deutschen

respektieren jeden Beruf, mögen aber nicht die, die von Sozialleistungen leben. Ihre Mentalität ist so aufgebaut, dass sie sich seit ihrer Pubertät daran gewöhnen, ihre Rechnungen selbstständig zu bezahlen. Sogar die Eltern der Deutschen gehen auf Einladung. Spontane Besuche in dieser Gesellschaft sind nicht erwünscht. Oft enden alte Menschen ihr Leben in Pflegeheimen. Und das ist die Norm. Die familiären Bindungen in Deutschland werden meist formal unterstützt. Daher ist die Fähigkeit, sich mit allem zu versorgen, was sie brauchen, im Leben am wichtigsten.

Deutsche sind sehr sympathisch in Kommunikation und gebildeten Menschen. Sie sind fleißig, sauber und nehmen ihre Pflichten sehr ernst. Alle, die in Deutschland ankamen, stellten bei der Erbringung von Dienstleistungen ein hohes deutsches Dienstleistungsniveau fest. Studierende in Deutschland versuchen schon während des Studiums, ihr Fach gründlich zu verstehen. Die Deutschen mögen keine Theorien und Verallgemeinerungen, unter denen die Praxis und das sorgfältige Studium der Frage hoch geschätzt werden. Medizin und Wissenschaft sind in diesem Land gut entwickelt. Kunst und Literatur nehmen zwar einen wichtigen Platz in der Rangordnung der deutschen Interessen ein.

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Berlin ist die musikalische Hauptstadt Deutschlands. Gleichzeitig werden hier klassische Traditionen gepflegt und gleichzeitig werden neue Musiktrends entwickelt. Es beginnt jedoch alles mit den Klassikern. In Berlin gibt es zahlreiche Konzertsäle, Musikhallen, Berliner Theater. Sie alle ziehen eine große Anzahl von Menschen an. In Berlin gibt es 15 Theater. Darunter: die Berliner Nationaloper, das Dramatheater, das Schiller Theater, das Gorky Theater, das Theater am Potsdamer Platz und andere. Jeder von ihnen kann auf seine einzigartige Geschichte stolz sein. Zunächst müssen Sie jedoch die wichtigsten Sehenswürdigkeiten kennenlernen [1].

Berliner Staatsoper. Es ist das älteste Theater in der Hauptstadt und offensichtlich das meistbesuchte. Die luxuriöse Halle bietet Platz für 1.300 Personen. Hier fand die Premiere von Wagners "Free Arrow", der berühmten "Russian Seasons", statt, und der herausragendste Bassist Feodor Chaliapin tourte. [2].

Theatergeschichte. 1741 ließ König Friedrich II. in Berlin ein Theater bauen. Die Arbeit wurde dem Architekten Georg von Knobelsdorff anvertraut. Im folgenden Jahr wurde das Royal Opera House eröffnet. Die erste Arbeit auf ihrer Bühne war „Cleopatra und Caesar“ von Karl Graun. Nach genau 100 Jahren wird hier der „Free Shooter“ inszeniert.

Im Theater fanden ständig Sinfonie- und Kammerkonzerte statt, der berühmte Komponist und Dirigent Felix Mendelssohn dirigierte die Opern. Im Jahr 1843 zerstörte ein starker Brand das Gebäude jedoch fast vollständig. Daher wurde das Gebäude bis 1844 rekonstruiert. Die Stadt konnte nicht so lange ohne Theater bleiben, die neue Oper wurde in kürzester Zeit gebaut. Nach der Geschichte des Theaters füllten Meyerbeer "Camp in Schlesien" und "Windsor Pranksters" Uraufführungen von Opern auf. In der neuen Halle dirigierte Richard Strauss. [3].

Das Schicksal der Nationaloper im 20. Jahrhundert. Nach dem Zusammenbruch des Deutschen Reiches 1918 wurde das Theater in Unter den Linden umbenannt. Das Theater beginnt mit hervorragenden Dirigenten und Komponisten auf der ganzen Welt zusammenzuarbeiten. Hier sind die Namen von Bruno Walter, Richard Strauss, Otto Klemperer und andere zu nennen. Die Berliner Staatsoper kooperiert eng mit Russland. Zwei Jahre lang findet hier Dygilevs "Russian Ballet"-Tour statt. Fyodor Shalyapin, Ida Rubinstein, Michail Fokin und Tamara Karsavina singen auf der Bühne. Das Theater wird zum Epizentrum des kulturellen Lebens nicht nur Deutschlands, sondern der ganzen Welt. Leider hat der Zweite Weltkrieg die Nationaloper nicht umgangen. Bis 1945 wurde das Gebäude dreimal zerstört.

Nachkriegsjahre. Die endgültige Restaurierung wurde erst 1955 abgeschlossen. Die Eröffnung der neuen Halle war geprägt von der Produktion der Wagner-Oper Nürnberger Meistersinger. Die Entstehung der Berliner Mauer konnte auch das Leben des Theaters reflektieren. Nach 1961 wurde die Anzahl der Produktionen reduziert, die Truppe spürte die Isolation der deutschen Oper von der ganzen Welt. Trotz der Schwierigkeiten unterstützte die Führung des Theaters mit allen Mitteln das Leben im Theater [4]..

Nach der Wiedervereinigung der Stadt übernahm Daniel Barenboim die Leitung des Theaters, der sein Bestes gab, um die Popularität der Oper wiederherzustellen.

Im Jahr 2010 begann eine neue Restaurierung, deren Ziel es war, das ursprüngliche Erscheinungsbild des Gebäudes wiederzubeleben und alle Verwaltungsräume und Probenräume in ein neues Gebäude zu verlagern. Der Bau wurde um 7 Jahre verzögert. Zu diesem Zeitpunkt zog die Truppe ins Theater Schiller.

Im Jahr 2017 fand während des berühmten Festivals „Opera for All“ die feierliche Eröffnung des renovierten Saals statt. Dieses Datum fiel mit dem 275. Jubiläum des legendären Theaters zusammen. Heute werden Werke von Mozart, Bizet, Wagner, Verdi, Strauss, Schostakowitsch, Rossini, Gounod, Tschaikowsky und anderen auf die Bühne der Berliner Staatsoper gestellt. Wenn Sie also in der Hauptstadt Deutschlands sind, können Sie sich immer noch nicht entscheiden, wohin Sie in Berlin gehen möchten, besuchen Sie die Nationaloper. Sie werden die Atmosphäre des alten Theaters spüren und einige der besten Opernproduktionen der Welt bestaunen können. Das Opernhaus finden Sie in Berlins Hauptstraße Unter den Linden.

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ВНУТРЕННЯЯ И ВНЕШНЯЯ ПОЛИТИКА АНГЛИИ В НАЧАЛЕ XX ВЕКА

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В начале XX века стремительными оборотами продолжает свое становление британская экономика. Начинает развиваться сельское хозяйство, изготавливаются продукты питания и сырьё для легкой промышленности, заметно возрастает добыча угля и увеличивается потребление хлопка. Но, несмотря на высокие показатели развития, британская индустрия начинает заметно терять свои позиции и проигрывает экономическую гонку Германии. Однако остается самой большой колониальной державой с территорией, которая составляет 20 % поверхности земного шара.

В 1906 году состоялись парламентские выборы, которые принесли жесткое поражение консерваторам. Власть перешла в руки либерального кабинета, лидером которого был Г. Кэмбелл - Баннерман. Правительство вносит ряд законопроектов, сделав стачки и стачечные фонды легальными. Но по другим вопросам 1906 – 1908 гг., парламент остается бессильным, т.к. лорды отвергают все указы. По всей Англии начинались массовые митинги и демонстрации, на которых осуждалась палата лордов и даже выставлялись требования к ее ликвидации. После долгих обсуждений, Асквит и руководство либералов решили сохранить палату лордов, но ограничить ее права. Таким образом, палата лордов не могла касаться финансовых и экономических указов. В 1910 году было организовано «Совещание восьми», но безрезультатно [1, с.19].

Кемпбэлл-Баннерман предоставил автономию завоеванным бурским республикам, это решение позволило создать в Южной Африке новый доминион – Южно-Африканский Союз. Вскоре Кемпбэлл-Баннерман уходит в отставку и его сменяет Асквит, который принадлежал к крылу либералов-

империалистов. В свою очередь, чтобы успокоить левое радикальное крыло партии, Ллойд-Джордж получает пост министра финансов.

С приходом Асквита, в Британской империи нарастают внутренние и внешнеполитические затруднения, также назревает предвоенный кризис.

По Ирландскому вопросу в 1912 году либеральное правительство внесло указ о гомруле (движение за автономию в Ирландии), который в свою очередь, палата лордов дважды отклонила. Тем самым, Ирландия осталась «горячей точкой» для Англии.

В начале XX века мировой империализм переживает глубокий экономический кризис. Англия теряет свою промышленную монополию. Промышленность испытывает кризис и это приводит к нарушениям прав рабочих. Их положение заметно ухудшается, что видно на примере тяжелой промышленности, угледобывающей и железнодорожной. Эти слои рабочего класса стали испытывать давление со стороны предпринимателей, т.к. английские капиталисты старались наверстать большие потери, путем снижения себестоимости своих товаров за счет рабочего класса. Соответственно, уровень жизни трудящихся стремительно падал. Безработица приобретала колоссальные размеры.

Экономический кризис способствовал росту забастовочных движений английской промышленности. В 1907 году стачки затронули машиностроительную, текстильную и ряд других отраслей промышленности. С 1910 года бастуют железнодорожники, рабочие судостроительных заводов, текстильщики и горняки, что приводит к ожесточенной борьбе со стороны правительства, которое направило против стачечников войска.

Начинают появляться профсоюзы, в которых рабочие объединяют не по профессиям, а по предприятиям. Забастовки уже несут не только экономический, но и политический характер.

Англия разрывает отношения с Германией после объявления таможенного протекционизма, но в свою очередь сближается с другими странами.

8 апреля 1904 года было подписано соглашение, которое изменило всю дипломатическую ситуацию в Европе. Оно касалось соглашений по рыбным промыслам в Ньюфаундленде. Франция лишилась права сушить рыбу в Френч Шор. Но взамен получила порт на реке Гамбии. Также Англия признала за Францией право на установление таможенных пошлин на Мадагаскаре [2,с.100].

Но самое важное соглашение касалось Египта и Марокко. Франция не препятствует деятельности Англии в Египте, а Англия предоставляет Франции полную свободу вмешательства в дела Марокко, с целью, обеспечения безопасности и спокойствия в этой стране.

Англия начинает активные дипломатические переговоры с Россией, в начале 1907 года. А уже 31 августа подписана англо-русская конвенция о размежевании сфер влияния в Иране, Афганистане и Тибете [3,с.50].

Для поддержания определяющей роли в Европе и чтобы не дать Германии усилить свое влияние на Англию, решилась на сближение с Францией и Россией.

Таким образом, проведенные реформы в Великобритании этого периода носили ограниченный характер. В них проявлялась реакционность и нежелание буржуазии идти на реформирования устаревших институтов власти. К сожалению, правительство делало лишь те реформы, которые были неизбежны. Рабочее движение росло, нужно было идти на уступки, но носили они эпизодический характер. Двухпартийность политической системы Англии – важная особенность реформирования периода конца XIX века – начала XX века.

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БИОГРАФИЯ «ЖЕЛЕЗНОЙ ЛЕДИ» МАРГАРЕТ ТЭТЧЕР

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Маргарет Тэтчер (13.10.1925 - 08.04.2013) - британский политик.

Маргарет Хильда Тэтчер была 71-м премьер-министром Великобритании, первой и единственной женщиной, получившей этот титул. Она была известна как «Железная леди» за ее волевой характер и суровый стиль в политике. Маргарет Тэтчер (девичья фамилия Робертс) родилась 13 октября 1925 года в Линкольншире. Она провела свое детство в Грантаме. Ее отец был владельцем двух продуктовых магазинов. Он принимал активное участие в политических и религиозных вопросах Грэнтэма. Маргарет посещала местную начальную школу, а затем ей была назначена стипендия, и она была переведена в более престижную гимназию. В 1943 году ее приняли в Оксфорд, где она четыре года изучала химию. В 1947 году она получила степень бакалавра наук. Еще учась, она стала председателем Консервативной ассоциации университета. После окончания университета она обосновалась в Колчестере, где работала химиком-исследователем в одной компании. В то же время она вступила в местную Консервативную партию и вскоре была избрана представлять консерваторов. Она была бесстрашным политиком и не боялась произносить речи на публике.[2,с.46]

В 1950-е годы Тэтчер полностью перешла от научных исследований к политической и юридической практике. В 1959 году после долгих дебатов она была избрана членом парламента. В то время она начала активно посещать экономический институт, где много узнала о благосостоянии

государства. В 1979 году Тэтчер победила на всеобщих выборах и стала лидером оппозиции. Это был ее первый срок в качестве премьер-министра Великобритании. Занимая эту должность, она завоевала репутацию «Железной леди». В частности, одна советская газета назвала ее так в ответ на ее антисоветскую речь в январе 1976 года. В течение 11 лет она была главой британского кабинета. За это время она провела ряд жестких экономических реформ и поддержала повышение налогов.[3,с.105]

В 1982 году Тэтчер отправила британские военные корабли на Фолклендские острова, которые были оккупированы Аргентиной. Через несколько недель конфликт был урегулирован, и Британия снова взяла острова под контроль. Это было ключевым фактором для второй победы Консервативной партии на парламентских выборах в 1983 году. В целом Маргарет Тэтчер победила на трех выборах. Третий срок в должности премьер-министра был для нее самым сложным. После того, как она предприняла ряд непопулярных мер, у нее не было другого выбора, кроме как покинуть пост. В 1992 году королева Елизавета II присвоила ей звание баронессы. В течение последних нескольких лет своей жизни Железная Леди страдала от нескольких инсультов и старческого слабоумия. Она умерла 8 апреля 2013 года.[1,с.200]

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Е.И. Кихтенко, Ю.Д Седовова MCDONALD'S И СОСА-COLA

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Каждый человек хотя бы раз в своей жизни был в популярном ресторане McDonald's. Это известнейшая американская компания, открывающая по всему миру кафе и рестораны быстрого питания. McDonald's уже давно завоевал любовь детей и взрослых. Эти заведения никогда пустуют, в них всегда можно увидеть много народа. В ресторанах McDonald's легкая, доброжелательная атмосфера, там вы без труда сможете найти свободный столик и заказать своё любимое блюдо. Меню этих ресторанов очень разнообразно и состоит из фаст-фуда: гамбургеры, картофель фри, чизбургеры, молочные коктейли, салаты с различными соусами, наггетсы, куриные крылышки, разные напитки, и много других вкусных блюд на любой вкус. С 1979 года в McDonald's появился Хэппи мил, комплексный

заказ для детей, содержащий игрушку. Этот товар сделал компанию ещё более популярной. Такой огромный выбор блюд, отличное качество, первоклассное обслуживание и доступные цены притягивают сотни тысяч желающих посещать McDonald's снова и снова.[1, с. 15]

В 1941 году братья McDonald's, Дик и Марк, открыли маленький ресторан в Калифорнии. Они подавали хот-доги, гамбургеры и молочные коктейли. В 1947 году у них работало 20 официантов. В 1949 году у них появились бумажные коробочки и пакеты для упаковки гамбургеров. После чего было решено снизить цену с 25 до 20 центов.

В 1954 году Рей Крок приобрёл у братьев Макдоналдов право выступать в качестве эксклюзивного агента по франчайзингу. В 1955 году он открыл свой первый McDonald's в маленьком городке Дес-Плейнз, штат Иллинойс (в настоящее время — музей корпорации). В 1955 году Кроком была зарегистрирована компания McDonald's System, Inc (в 1960 году переименована в McDonald's Corporation). В 1961 году Крок полностью выкупил все права на компанию. Под торговой маркой McDonald's на середину июня 2017 года работало 32 090 ресторанов в 119 странах мира (в том числе около 15 тысяч из них расположены в США). Сейчас компания «McDonald's» каждые 8 часов открывает свой новый ресторан. Существует более 15 000 ресторанов в более чем 197 странах. Одним из наиболее популярных проектов компании в последнее время стала сеть кофеен «McCafé». В 2018 году выручка корпорации достигла отметки в \$25,08 млрд. При этом чистая прибыль McDonald's составила \$5,96 млрд.[3]

Что такое McDonald's сейчас? Американская корпорация, до 2018 года самая крупная в мире сеть ресторанов быстрого питания. По итогам 2018 года компания занимает второе место по количеству ресторанов во всём мире, после сети ресторанов Subway. Хочешь вкусно и быстро перекусить? Добро пожаловать в Макдоналдс.

История кока-колы началась в 1886 году в Атланте. Джон Пембертон, американский фармацевт, изобрел новый напиток. Два его основных ингредиента — южноамериканский лист коки и африканский орех кола. Пембертон не мог сам придумать название, которое бы подходило его напитку. В итоге его партнер Френк Робинсон предложил название «Coca-Cola».[2, с. 4]

Сироп изначально был запатентован как лекарство, предназначенное для восстановления нервной системы. Его стали продавать в аптеках города. Летом в одной из них продавец Уилли Венэйбл решил по просьбе посетителя развести лекарство не водой, а содовой. Шипучая смесь очень понравилась гостю, с того времени напиток употребляют в газированном виде.

Однако Пембертону напиток Кока-кола так и не смог принести достойного дохода. Он был вынужден продать часть своей доли аптекарю Венэйблу, который первый продал газированную колу.

Сегодня кока-кола производится в странах всего мира, включая Россию и Китай; это самый популярный напиток в мире.

Рецепт кока-колы до сих пор держат в секрете. Сегодня кока-колу можно купить в 197 странах. Миллионы людей пьют ее каждый день. Это самая известная торговая марка в мире.

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POSTAL SERVICE IN CHINA

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This article deals with the work of China's national postal operator, China Post. The main focus of the article is the description of the work of China Post from the point of view of the buyer in the online stores of China. Issues related to sending and tracking international mail are considered. The factors affecting the speed of delivery of international mail from China are also described.

The post office in China began to develop rapidly due to the impressive population and the large territory of the country. For the past few decades, China's economy has been undergone rapid dynamic growth. In connection with this, the use of domestic and international postal services has developed.

According to historical documents, postal services appeared in China four thousand years ago during the reign of the Shan Dynasty. China Post acquired its modern look after the formation of the People's Republic of China in 1949. However, since 1914 China Post has been part of the Universal Postal Union.

The current postal service of the People's Republic of China was founded in 1949. It replaced the Junghwa Post in mainland China in 1949, and also in the Universal Postal Union in 1972. Previously, it was in charge of the Ministry of Post and Telecommunications. China Post is directly controlled by the State Postal Bureau of China, which has overall responsibility for regulating the postal service in China. The State Post Office is an agency under the Ministry of Information Industry of China.

The largest international mail sorting centers in China are located in Beijing, Shanghai, Shenzhen and Guangzhou. The first two are the largest and most modern. As a rule, sorting in these centers occurs relatively quickly. As for sorting in Shenzhen and Guangzhou, here international mail processing is slower. In addition, the main stream of export mail goes through the international airports of

Beijing and Shanghai. This should be considered when shopping. Usually sellers and online stores do not hide which provinces their warehouses are located in and where they ship from.

It is necessary to pay attention to processing and sending mail. Like many postal services in the world, China Post allows you to ship remotely. The seller can issue a shipment and get a tracking number without leaving home. In this case, the buyer can get the track number an hour after the payment.

Apart from this, there are large firms selling at various trading platforms in China or online stores. Due to the huge volume of orders, they use the services of various logistics services, which are essentially an intermediary between the store and the mail and perform only one function - the delivery of the packages prepared for sending to the post office and managing these items.

After receiving the parcel directly by China Post, it undergoes standard procedures for sorting, customs clearance and preparation for export. Next is the export itself, i.e. physical parcel sending from China in the direction of the recipient's country. It can be both direct delivery and transit delivery.

Since China is a part of the Universal Postal Union, the work of the national postal operator China Post is also regulated by UPU regulations, according to which consignments up to 20 kg can be accepted by regular mail and up to 31 kg by EMS.

You can yourself pack the package without the help of services of postmen. The thing is that in China Post there are no packaging requirements. Parcel can be sent in any form. Young people who come to school usually send clothes in a bag. They sew, glue the dispatch form and give the parcel. Nevertheless, some rules on sending are still present in international shipments. But it is unnecessary to buy a branded box right in the post office of the sender.

There are no queues for more than five or seven people at post offices in China. Registration of parcels takes several minutes: a person can fill in the form and paste it on the parcel.

When filling in the form, the sender can insure the package by paying a tenth of the amount. If the package is lost, the person will receive money for it. The maximum amount for which you can insure a shipment is 2000 yuan, which is approximately equal to 17 thousand rubles.

According to the rules of the Universal Postal Union, international mail can be shipped from the country of origin of the mail to the country of transit through third countries. Naturally, the country of departure tries to minimize the cost of transporting mail and, if possible, uses the carrying postal capacities in the forward direction. But with an increase in the overall flow of mail exports, the question arises in a sufficient number of direct transport links between countries. Speaking about air shipments (and most of them), the possibility of direct delivery will depend on the loading of aircraft on direct flights and on the number of such flights.

If the shipment of mail from China to Russia still has the possibility of direct shipment, Ukraine and Belarus don't have such opportunities and a very large number of items are delivered in transit.

Briefly consider how this happens. For example, there is a package from China to Ukraine (or Belarus). The parcel passes through customs in China and is processed for export. But it cannot be loaded on the nearest direct flight due to the lack of free space in the luggage compartment of the aircraft. In this case there can be two variants. The first – a parcel will wait for a few more days for the possibility of a direct dispatch. The second - it will be sent in transit, for example, through Europe. In this case, the parcel may go, for example, to Frankfurt Airport. There it will be sorted and will continue to wait for the flight to Ukraine. And if it is not there, it can be again sent in transit, for example, to Hungary, Austria, or to some other European country with the same sorting procedure. Naturally, such transit only increases the delivery time of the parcel, although with properly organized logistics and the presence of carrying capacities on flights, the postal item can visit all major European airports in just 2-3 days.

Often, when shopping in online stores in China, we see an offer of free shipping worldwide. But you should not think that China Post works for free and does not charge for delivery from the sender. The fact is that the seller takes into account the cost of the postal tariff in the cost of goods. But the tariffs for sending international mail in China are just not high. The basic tariff for sending a small package up to 100 g to European countries is only 18 Yuan. And another 15 Yuan is taken for every additional 100 g of weight.

The above tariffs are basic and in the case of a large volume of shipments (and they are just the same for Chinese sellers), China Post provides substantial discounts to sellers from the basic tariff. This fact allows the latter to keep the prices for the goods not high and to declare "free" delivery. And in this regard, the majority of small and not expensive Chinese goods are sent by the simplest and cheapest types of shipments, which do not provide for the provision of a tracking number.

China Post sells track numbers as a separate option, in addition, it provides shipping insurance. The cost of the track number itself is 8 Yuan, and insurance is 1 Yuan for every 100 Yuan of the assessed value. As a result, for the buyer track number of China Post will cost from \$ 1.9 to \$ 3. Chinese online stores, as a rule, sell track numbers for low-cost shipments as well as a separate option. If the purchase is made from a Chinese seller on eBay, then by agreement with the buyer and for a fee the sellers can also purchase a tracking number

The cost of shipping EMS will be much more expensive. So for example, sending a parcel weighing 1 kg to Russia will cost the sender 360 Yuan when sending documents or 435 Yuan when sending goods.

There are no significant differences between sending parcel from China and from another state, since this process is standard and mandatory for all postal operators. In addition, there is an opportunity to make a remote registration and payment of the order using the Internet. This significantly saves time and

drastically reduces the speed of delivery, because electronic orders have priority. In fact, an Internet user already receives dispatch information several hours later. The parcel, which was accepted and paid for, then undergoes an absolutely standard classification procedure and customs registration, and only then the shipment directly to the addressee.

To track the package at the initial stage, it is better to use a special service, this can be the official website of the company "China Post". On the China Post website, you can see all the details of each step of moving a parcel, but only if it is located within the sending country. If the parcel has already crossed the border of the country of the sender, that is, China, it is necessary to control the movement of the cargo with the help of the operator of the country of the recipient. But in addition to specialized sites there is a specially designed program "Track Checker", which is sufficient to install on a personal computer in order to be able to follow the movement of mail traffic. The program "Track Checker" also allows its user to see information about all carriers' companies, possibly participating in sending your mail. In case if your purchase does not turn out to be a one-time deal, and you plan to use such services in the future in order to save time, be sure to install such a tracking program on your computer. The program will allow you to view information about the current location of your shipment.

The company "China Post" to denote the status of transportation of postal goods of international importance uses the following definitions:

- "Collection" - the parcel has been processed and accepted at the post office of the sending country;
- "Opening" - the parcel passes the distribution stage;
- "Dispatching" - the parcel passes the stage of processing and preparation for movement across the border of the sender's country;
- "Departure from outward office of exchange" - customs control passed;
- "NULL" is a definition that is used to denote all transitional stages that do not have an English translation.

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THE ROLE OF ENGLISH IN THE WORLD

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The significance of English in the modern world at the moment is quite high. Not so long ago it was a foreign language for us, and today it is an international one. In all countries of the world the study of English is of great importance. Almost everyone wants to learn it at least at the elementary level. Today, children begin to learn this language at the pre-school age.

Many people do not understand whether English is necessary in the modern world or not. However, it is evident to everyone that today it plays an important part when seeking employment. People who want to find a prestigious and well-paid job must be obliged to know English well. This is due to the fact that large firms often cooperate with foreign partners. Today English is an international language. People should have a good command of English to negotiate and make deals with foreign partners.

Travelling to English-speaking countries is possible only if you know and understand one or more foreign languages. It is no secret that today almost everyone wants to go abroad for a vacation. Thanks to the knowledge of English, you can easily communicate with people not only in English-speaking countries. Anywhere in the world there is a certain percentage of the population that can understand a foreign language. English is also well-spoken by people whose work is connected with tourists. In that case, if you know a foreign language, you can always easily ask for help in a foreign country. That is why you will feel confident abroad.

And now let's look how people from different countries throughout the world learn English.

Vietnam

This country is now actively developing and there are many factories of western companies on the outskirts of large cities. Tourism is not also losing its way. In this regard, the parents of young Vietnamese understand that English is very useful for their children. Therefore, this language is taught from kindergarten, and sometimes from 3-4 years. There is a great demand for foreign teachers in Vietnam. As a rule, the lesson is taught by two teachers: one is a teacher from Europe or America and his Vietnamese assistant, who explains the meaning of the words to the children. But mostly children speak only English – it turns out a kind of full language immersion, because to speak Vietnamese with a teacher from the United States is still impossible.

Teenagers learn English not only in school, but also in the cinemas – all movies come with the original soundtrack and Vietnamese subtitles.

Sweden

For residents of the Scandinavian countries communication in English is not difficult. They speak Byron's language as fluently as they speak their own. The thing is that the education system in Sweden is based on the practical mastering of the English speaking structure. For Swedish students is the usual task to see and then discuss the film in the classroom, find friends on the Internet and talk in class about what was “chat” about, talk about books read. By the way, Swedish students

do not read specially adapted literature in a foreign language, and most of the programs on television are in English.

It is necessary to point out that their credo is that language is the main human tool for thinking, communication and learning. Knowledge of several languages opens up new perspectives abroad, expands opportunities for communication and understanding of other lifestyles. English surrounds us in everyday life and is used in various fields such as politics, education and economics. Fluency in English enhances the individual's chances of being accepted in various social and cultural societies, and also provides an opportunity to participate in international educational and work programs, – the Swedish Ministry of Education website says.

In Sweden, there is no knowledge, ability and skills or competencies. They work with the triad “can – want – might”.

Thus, the focus is on three areas of language use:

1. ability to interact;
2. ability to understand information;
3. ability to express their thoughts and position.

Accordingly, the student comes up a way from the ability to understand signage to reading scientific texts and legal documents, and from short messages about what the child likes to debates and meetings at work.

Spain

The Spaniards are sure that Spanish is the main language on the planet, but English is also paid attention to. In any case, in school, in addition to the main lessons on the study of the language of Shakespeare, the teaching of some subjects (labor training, the study of the world) is conducted in English.

Knowledge of several foreign languages has now become a mandatory requirement for quality education and successful employment. Increasingly, parents when choosing a school for their child pay attention to the quality of foreign languages teaching in an educational institution. Until recently, the study of foreign languages in the schools of Spain was far from the first place, especially when it came to public schools. Recently, however, there have been significant changes in this direction. For example, the Government of Madrid has set the task that schools should practice integration, have bilingual education in two languages: Spanish and English.

A decision was made to introduce compulsory study of the English language in all schools in Spain, and even in schools where there was no English teaching at all and children studied other foreign languages. The main focus is that children will not only learn English as a foreign language, but also receive knowledge in general subjects in English in addition to Spanish.

Primarily, in these schools subjects such as social sciences, geography, physics, history and natural sciences are taught in English. Thereafter the list of subjects will be expanded. Innovations will not affect only Mathematics, the Spanish language and Literature.

Thus we can say that English is of great importance in many countries of the world. People understand the importance and necessity of learning this language.

But as we gain a foothold in new territories, the English language is changing and forming new dialects. Residents of different English-speaking countries are increasingly difficult to understand each other: different pronunciation of words, intonation, selection of words and expressions, grammatical rules.

The USA

American English is the most famous version of English outside the UK. It is widely used all over the world, so it is often compared with British English.

It is interesting that English is not an official language in the U.S. Constitution. In fact, the official and most common language is the American version of English, but it has no state status. Although many Americans are fighting for the rights of the English language fearing the spread of Spanish. Some States even gave the English official status.

It is important to note that a single American accent does not exist: in different States the pronunciation of English varies. “The most correct” is the so-called General American English.

Canada

English is one of the two official languages of Canada together with French. It has no official status only in the province of Quebec.

Canadian English is the closest to American English, but it retains some of the British features that Americans have lost.

Most of the words are pronounced either in American or British. But there are several typical Canadian pronunciation variants. For example, “about” is pronounced similar to “a boat” or “aboot”. At the same time, they do not get confused, because the word “boat” sounds like “a bot”, similar in other words with this diphthong. Canadians also pronounce words of French origin according to French pronunciation rules.

Ireland

Irish English is called Hyberno-English. English is considered the official language along with Irish. It is spoken by a predominant number of Irish, although it is now being gradually replaced by a resurgent Irish language. In Ireland, the difference between written and spoken English is clearly visible: the written variant is very similar to the British one, and in spoken English the dialect has a much stronger expression.

More than that, in Ireland there are several dialects with different versions of pronunciation – for example, Korky or Dublin.

Australia

Australian English is actually the official language in Australia, although it has no state status. This dialect was recognized as early as 1820 – just 32 years after the founding of the colony, it already had significant differences with the British version of English.

Australian was formed under the influence of many dialects of the British Isles, as well as local languages of Australia. This option was created by the children of the first settlers: unlike their parents, they had already had a different accent, used new words and created new concepts.

In general, the Australian pronunciation is more like British than American – but only at first glance. If you listen, it becomes clear: Australian is different from both options.

Australians swallow syllables in the middle of a phrase, increase intonation at the end of a sentence and speak fluently.

Thus, it turns out that the English language is so diverse and subject to change. It gradually conquers the whole world, but it is changing and moving away from the source.

In the world of high technology there is a great tendency to create inventions and programs. Basically, all of them have foreign software and settings. Phone, tablet, laptop or some kind of program - they are all foreign products, which, in turn, have a foreign guide to the application, most often in English. Therefore, a person who wants to master the technology perfectly must know English.

The main category of the population that owns knowledge of the English language is the youth. As a rule, this process takes place during a lesson in computer games. Teens spend a lot of time at the computer, and since all popular games are world hits, the manual is also English. Consequently, children subconsciously learn a foreign language without knowing it. Another way to learn a language is through movies and music. Currently, the main consumer product among young people is foreign films. They are very popular not only among European countries, but also in Russia. Most of them are available in English format. The desire to listen and see something new motivates young people to learn a language in order to understand what is being said.

The relevance of the English language is increasing every year. It is the main means of communication in the international arena. Now a person without any linguistic knowledge may stop in development, because all new items in any area of life include a foreign foundation. Therefore, it is worth starting to study and improve your knowledge at any age, because the learning process in our country occurs throughout life.

Д.М. Атнагуллова

**OUTSTANDING PEOPLE OF GREAT BRITAIN:
CONTRIBUTION TO SCIENCE AND WORLD CULTURE**

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In the modern world there are many cultures that interact in some ways. The ongoing processes of globalization are accompanied by the expansion of ties between various countries and peoples. The ability to communicate with people from different cultures has become a daily reality. Many people participate in international organizations, forums and conferences, work in multinational companies, study abroad. To support these diverse and multi-level contacts, it is

necessary to have appropriate knowledge of not only a foreign language, but also a foreign language culture. To form a sufficient level of cultural and communicative competence, the linguistic and cultural dictionaries and dictionaries of cultural literacy that have emerged in recent times are intended. According to some researchers, they cannot be attributed to either encyclopedic or linguistic dictionaries, since they combine the features of explanatory, encyclopedic and linguistic-cultural dictionaries.

There are countries on our planet that everybody knows everything and one of them is the United Kingdom. Looking through the huge lists of 100 great residents of this country, it seems that the United Kingdom has collected all the minds and talents: a lot of politicians, scientists, stars and writers were born here, leaving a huge contribution to the world history. And many famous people of Great Britain made a huge contribution not only to the development of this country, but also to the science and culture of the whole world.

“The 100 Greatest Britons” is a British television and radio program that was released in 2002 on the BBC television channel and radio station, dedicated to choosing the hundred of the greatest personalities in British history. As part of the program, a special poll was taken among residents of the UK to select one hundred of the most famous Britons and after the debate to choose the greatest representative of the kingdom. The series included individual programs featuring the top ten, with viewers having further opportunity to vote after each program. After the survey debates took place, according to which the final rating of the British was made.

It is surprising that no British citizen alive at the time of the survey was included in the final top ten rankings. Margaret Thatcher took the highest position of the living at that time, which was placed on the 16th line. Sir Winston Churchill, British Prime Minister from 1940 to 1945 and from 1951 to 1955, was recognized as the greatest Briton. The top 19 lines were occupied by people of English descent (although Sir Ernest Shackleton and Arthur Wellesley, the first Duke of Wellington, both were born in Anglo-Irish families in the territory currently belonging to the Republic of Ireland). Scottish candidate with the highest rating was Alexander Fleming, who took 20th place; of the Welsh, Owain Glyndur rose above all, reaching 23 lines. The activities of the sixty Britons on the list came in the twentieth century. Ringo Starr was the only member of The Beatles who did not make it to the list.

I want to point out 4 outstanding people making a great contribution to the development of the UK.

Winston Churchill (1874-1965)

At the end of 2002, the BBC invited all residents of the United Kingdom to identify “the greatest Briton in history”. It was determined by voting that the British consider Winston Churchill to be their most distinguished compatriot.

English politician, statesman, British Prime Minister Winston Leonard Spencer-Churchill was born November 30, 1874 in Blenheim Palace, Oxfordshire, United Kingdom. Winston Churchill was educated at Harrow’s privileged school

and at the British Royal Military College, which he entered only on the third attempt. In March 1895, he was enrolled in the Fourth Hussar Regiment as a lieutenant assigned to Hackpshire.

This man for half a century embodied Britain – its power, its weaknesses, its policies and its eccentricity. And he may not have led the country for long, but it was the most difficult and, perhaps, the most important time in the modern history of Great Britain. Winston Churchill survived six monarchs and two world wars. Thanks to him the world changed beyond recognition, but he was always true to himself, his country and his principles.

The main quality of this person, in fact, made him one of the most prominent political and state leaders in world history, is the extremely tough, consistent defense of the interests of his social class and his state. “If you want to reach the goal, do not try to be sensitive or smart. Use coarse techniques. Hit the target immediately. Go back and strike again. Then strike again with the strongest blow of the shoulder,” – the experienced and successful politician taught.

W. Churchill was a man of enormous willpower. Suffice it to say about his attitude to diseases. Even being ill he didn't stop working. During World War II, despite the fact that he had a bad cough 6 times he had shown himself to be an exceptional international citizen. In general, his behavior during the war, his speeches in parliament and on the radio can be considered as an example of courage. It was he who invented the famous symbolic gesture “V” – “Victory”.

In his youth, Churchill proved to be a brave, military officer who took part in a number of military campaigns. A daring escape from the Boer captivity at the end of 1899 brought him fame. Within a couple of days after the landing in Normandy in 1944, he paid a visit to the headquarters of B. Montgomery, which was only three miles from the enemy's positions, while there was no solid front line and there was a definite threat in the chaos of fighting on the German units.

In his policy, Churchill always proceeded from the interests he advocated, rather than followed the current situation, “public sentiment”, “opinion polls”, “ratings”, etc. “The difference between a statesman and a politician is that a politician is guided by the next election, and a statesman is guided by the next generation” - this is his credo. He never tried to “please everyone”: “Who agrees with everyone, no one agrees with him”.

There are some of his achievements.

In 1911-1916 he became the first Lord of the Admiralty (naval Minister). In the First World War, Churchill participated in the defense and evacuation of Anchorena (1914), was one of the active organizers of the Gallipoli campaign (1915-1916), the failure of which led to his resignation. In 1916, as Chancellor of the Duchy of Lancaster, he went to Flanders in the army as commander of a battalion of Fusiliers of the Royal Scottish regiment. From 1917 to 1918 he was Minister of military supply, in 1919-1922 – Minister of war and Minister of aviation. In 1924-1929 he served as Minister of Finance, having passed to the Parliament from the Conservative party. In September 1939, with the outbreak of World War II, under pressure from public opinion, Churchill was appointed the

first Lord of the Admiralty again. After leaving office for health reasons in April 1955, Churchill did not play an active role in politics in the last years of his life. He remained a Member of Parliament until 1964.

In 1953, Churchill was awarded the Nobel Prize in literature. In the same year, Queen Elizabeth II awarded him the highest order of Great Britain – the order of the Garter. In 1963, he became an honorary citizen of the United States.

On January 24, 1965, Winston Churchill died in London.

Margaret Thatcher "Iron Lady" (1925-2013)

Margaret Thatcher was a British stateswoman who served as Prime Minister of the United Kingdom from 1979 to 1990 and Leader of the Conservative Party from 1975 to 1990. She was the longest-serving British prime minister of the 20th century and the first woman to hold that office. A Soviet journalist called her “The Iron Lady”, a nickname associated with her uncompromising politics and leadership style. As Prime Minister, she implemented policies known as Thatcherism.

Thatcher introduced a series of economic policies intended to reverse high unemployment and Britain’s struggles in the wake of the Winter of Discontent and an ongoing recession. Her political philosophy and economic policies emphasized deregulation (particularly of the financial sector), flexible labor markets, the privatization of state-owned companies, and reducing the power and influence of trade unions. Thatcher's popularity in her first years in office waned amid recession and rising unemployment, until victory in the 1982 Falklands War and the recovering economy brought a resurgence of support, resulting in her decisive re-election in 1983. She survived an assassination attempt in the Brighton hotel bombing in 1984.

Being a controversial figure, she is nonetheless viewed favourably in historical rankings of British prime ministers, and her tenure constituted realignment towards neoliberal policies in the United Kingdom; despite the passage of time, debate over the complicated legacy of Thatcherism persists.

Michael Faraday (1791-1867)

M. Faraday was an English scientist who made a considerable contribution to the electromagnetism and electrochemistry study. His main discoveries include the principles underlying electromagnetic induction, diamagnetism and electrolysis. He made a brilliant discovery in the field of electrical energy - electromagnetic induction. He understood and made important conclusions on the thermal conductivity of various materials. Already known throughout the world, Faraday always remained a very simple person. He did not need glory; he was able to give up the high rank.

Despite the fact that Faraday got little formal education, he was one of the most influential scientists in history. It was his research on the magnetic field around a conductor carrying a direct current that Faraday established the basis for the concept of the electromagnetic field in physics. Faraday also established that magnetism could affect rays of light and that there was an underlying relationship

between the two phenomena. More than that, he discovered the electromagnetic induction and diamagnetism principles, and the laws of electrolysis.

Among his achievements as a chemist, Faraday discovered benzene, invented an early form of the Bunsen burner and the system of oxidation numbers, and popularized terminology such as “anode”, “cathode”, “electrode” and “ion”. Faraday ultimately became the first and foremost Fullerian Professor of Chemistry at the Royal Institution, a lifetime position.

Faraday was an excellent experimentalist who conveyed his ideas in clear and simple language; his mathematical abilities, however, did not extend as far as trigonometry and were limited to the simplest algebra. James Clerk Maxwell took the work of Faraday and others and summarized it in a set of equations which is accepted as the basis of all modern theories of electromagnetic phenomena. On Faraday's uses of lines of force, Maxwell wrote that they show Faraday "to have been in reality a mathematician of a very high order – one from whom the mathematicians of the future may derive valuable and fertile methods." The SI unit of capacitance is named in his honour: the farad.

Isaac Newton (1643-1727)

He was an English mathematician, physicist, theologian, astronomer and author who is widely recognized as one of the most distinguished scientists of all time, and a key figure in the scientific revolution. We know about him from school: he outlined the law of universal gravitation, explained 3 laws of mechanics, and developed the theory of color, integral and differential calculus; on his account more than one mathematical and physical theory. This is a scientist with a capital letter, because even eating and sleeping he considered necessary, but lost time that could be devoted to science. Newton had no direct students, but his books and research grew a number of English scientists.

His book “Mathematical Principles of Natural Philosophy”, first published in 1687, laid the foundations of classical mechanics. Newton also made contributions to optics, and shares credit with Gottfried Wilhelm Leibniz for developing the infinitesimal calculus.

In Principia, Newton formulated the laws of motion and universal gravitation that formed the dominant scientific viewpoint until it was superseded by the theory of relativity. Newton used his mathematical description of gravity to prove Kepler's laws of planetary motion, account for tides, the trajectories of comets, the precession of the equinoxes and other phenomena, eradicating doubt about the Solar System's heliocentricity. He demonstrated that the motion of objects on Earth and celestial bodies could be accounted for by the same principles. Newton's inference that the Earth is an oblate spheroid was later confirmed by the geodetic measurements of Maupertuis, La Condamine, and others, convincing most European scientists of the superiority of Newtonian mechanics over earlier systems.

Newton created the first practical reflecting telescope and developed a sophisticated theory of colour based on the observation that a prism separates white light into the colours of the visible spectrum. His work on light was collected

in his highly influential book *Opticks*, published in 1704. He also formulated an empirical law of cooling, made the first theoretical calculation of the speed of sound, and introduced the notion of a Newtonian fluid. In addition to his work on calculus, as a mathematician Newton contributed to the study of power series, generalized the binomial theorem to non-integer exponents, developed a method for approximating the roots of a function, and classified most of the cubic plane curves.

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Т.А. Генералова ЙОРКСКИЙ СОБОР

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Йоркшир – это историческое графство, расположенное в Северной Англии. Оно считается не только самым большим, но и самым английским из всех графств: от холмов и лугов, и цветущих садов местных жителей до умиротворённых классических окрестностей Англии.

Считается, что самые яркие характеристики, описывающие графство – начиная с диалекта и заканчивая ландшафтом – уходят корнями в историю поселений и великих изобретений, и всё это является источником гордости народа. Здесь акры долин, национальных парков, расположенных на холмах, и прекрасного побережья, усеянного местами с названиями, пришедшими от викингов, средневековыми аббатствами, обозначенными местами боёв во время Гражданской войны, сельскими домами аристократов и промышленников.

Не менее важными предметами гордости у жителей Йоркшира являются достопримечательности. Одна из самых известных - Йоркский Кафедральный собор, история которого начиналась с небольшой церкви, построенной в 627 году специально для крещения короля Нортумбрии Эдвина. После его смерти церковь пришла в упадок и совсем обветшала. Пришедший в 670 годах в Йорк проповедник Уилфред приложил немало усилий для восстановления здания. Но после этого церковь еще не раз терпела перестройки. В 741 году большая часть церкви была повреждена пожаром, в последующие годы она часто подвергалась набегам захватчиков. И лишь в 1222 году маленькая церковь начала превращаться в готический

собор по приказу Архиепископа Йоркского. Строительство продлилось более четверти тысячелетия.

В наши дни Йоркский Кафедральный собор считается самой большой церковью Великобритании. Также считается, что церковь прекрасно сохранила свой изначальный вид несмотря на множественные реставрации.

Если спросить людей, посетивших Йоркский собор, чем больше всего он запоминается, то, безусловно, вам ответят, что Кафедральный собор запоминается своими легендарными витражами. Окно, находящееся на западном фасаде собора, носит название «Сердце Йорка» и является самой выдающейся частью витражных окон - расположено оно прямо над часовней Леди Чепл. Дизайн каменного узора на окне представляет собой сердце Иисуса Христа и напоминает о христианской любви. Этот витраж был создан в начале четырнадцатого века и считается самым крупным витражным произведением в мире. На нем изображены и святые, и апостолы, и епископы. Интересной особенностью является тот факт, что апостолов изображено не двенадцать, как принято в Евангелие, а одиннадцать: на витраже отсутствует Иуда.

На данный момент собор полностью функционирует, поэтому среди посетителей собора присутствуют не только туристы, желающие полюбоваться готическим зданием с его великолепными витражами, но и множество местных католиков, которые считают собор истинным Храмом Божьим.

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Ю.В. Захарова, И.С. Куркова, Д.А. Егорова
MODERN SLANG IN BRITAIN AND AMERICA:
MEANING AND ORIGIN

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In this article we will consider one of the most interesting forms of the language which is called slang. In any language there are terms which are not used in textbooks, books, dictionaries. Slang is speech element that does not coincide with the norm of a literary language, usually emotionally colored. Currently, slang is one of the most interesting methods of using language.

It is well known that slang has always existed and continuously changed. Slang was created and applied in different social and age groups. It is a youth language that accurately reflects the linguistic picture of the world of

representatives of a given culture. But very often these words go beyond the limits of one group and become widely used.

Slang in English plays an important part. It determines its difference from other languages of the world. Slang reflects a simple everyday communication, in which people are not obliged to observe any restrictions.

In this article, we consider the slang expressions and words that are used in Britain and America.

Each country has its own slang, but the UK is especially known for its unique phrases and complex translations. British slang changed and adapted over several centuries from city to city, each district added its own set of words to it.

Thanks to cinema, television and social networks, slang expressions began to spread much faster around the world. However, some of them are still specific to some cities and districts. In this article we have collected some British slang expressions thank to them you will become a step closer to British culture and be able to show your knowledge among the local population. And if you are learning English in the UK, you may have already heard some of these phrases.

1. **Donkey's years** means "for a long time".

Origin: In the old days, a special mechanism called donkey was used to load things onto the ship which was very slow. Therefore, when asked how long the process would take, they answered donkey's years.

Example: This cake is taking donkey's years to bake. (This cake is cooked for a long time)

2. **Bob's your uncle.**

This phrase is added at the end of the sentence and means "and that's it" (that's all).

Origin: This phrase dates back to 1887 when British Prime Minister Robert Cecil made an unpopular decision to appoint his nephew Arthur Balfour (Lord Salisbury) as Chief Secretary of Ireland. After a few decades, "Bob's your uncle" has become a sarcastic slang term that is still used today. It means that if your uncle is Prime Minister Robert (Bob), then it opens many doors, which means everything in this life may seem easy.

Example: To get the restaurant, you take the next left turn and it is right in front of you, Bob's your uncle! (To get to this restaurant, you need to turn left, and it will be directly opposite you, that's all!)

3. **Lurgy.**

This word is used when you are ill. Do not go near people with "lurgy", but what if you get infected "!"

Origin: This word was first used in the 1954 radio play on the BBC. The plot featured a fictional disease called "lurgy". Since then, this expression has become the usual name for non-serious diseases.

Example: I can't come into work today because I have the lurgy. (I can't go to work because I got sick)

4. **Not my cuppa tea.**

Something not your style demonstrates how important it is for the British to have their favorite tea brewed properly.

Origin: This phrase appeared in the 19th century, but it sounded like "my cup of tea" and described what you like. In the 1920s, the "not" particle was added to it in order to describe what you do not like. "Cuppa" is a more colloquial version of "cup of"; it also often replaces the complete expression of "cup of tea", for example, "Fancy a cuppa?" (Do you want some tea?)

Example: *I don't fancy going to that restaurant for dinner; it's not my cuppa tea.* (I do not want to have dinner at this restaurant, it is not my type).

5. **Potluck** means good luck in a situation, resolution of which is difficult to predict.

Origin: This expression came from the 16th century, when a pot of stew and old unappetizing pieces of vegetables were served in a circle. If you caught "pot luck", you got a good piece of meat.

Example: *It is such potluck that the sunshine came out in time for the picnic today.* (This is such a luck that during our picnic the sun came out).

6. **Pukka** describes something genuine and of high quality.

Origin: This word came to English from Hindi and Urdu in the 19th century. It comes from the original "pakka", which describes ripened and easily digestible fruits.

Example: *This designer handbag is pukka.* (This designer handbag is of high quality).

7. **Sick**

As slang, this word is used to describe something cool and super rather than the sense of feeling bad.

Origin: This slang expression appeared in the 90s in South London among adolescents who were addicted to dubstep.

Example: *Robbie's new car is sick!* (Robbie's new car is just super!)

8. **Tickety-boo** means "everything is alright".

Origin: This expression may have originated in Scotland, where it is the name of a popular children's song. The song titled "Everything Is Tickety-Boo" was recorded by Danny Kay in the film "Merry Andrew".

Nowadays, this expression is most often heard in Canada. Perhaps it was originated in the British army. According to some sources, it can be related to Hindi expression "tickee babu," which means "everything is fine, sir." Some people write this "diggity boo" or "tiggity boo".

Example: *Everything is tickety-boo* (Everything is alright).

It is necessary to point out that American slang is distinguished by its humor, brevity and accuracy. Let's look at the most popular words.

1. **Awesome** means "fantastic".

If you watch sitcoms and TV shows, you know that Americans use this word extremely often. Awesome can mean both delight and admiration, and fear: awe is translated as "fear", "awe".

Example: *It was awesome* (It was frightening).

The movie was awesome (This movie was wonderful).

2. **A couch potato** is a lazy person who spends most of his time lying on a sofa and watching TV too much.

This expression was invented to mean someone who spends too much time in front of the TV, because in some Western countries, people watching TV usually lie on the sofa and eat potato chips.

Example: *My husband is a couch potato. He sits in front of the TV all day long.*

3. **To have a crush on** means being in love with someone (often not a very long time).

This is a great feeling, and it means that you are passionate about someone, you like him/her more than just a friend. And if somebody has a crush on you, it's the same thing - he likes you in a more intimate way than his friends like.

Example: *I have the biggest crush on Peter. He's so cute!*

4. **Ripped** means well-developed and muscular" (about a man).

In everyday English *ripped* means "torn". You can rip your jeans or piece of paper, but the meaning is different in slang. If a person is ripped (usually they say about men or young men), this means that he has big muscles and a strong body. Probably it is because of going in for sports.

Example: *He started going to the gym to be ripped.*

5. **To chill out** means "to relax", "to rest".

The phrase can be used both with the preposition and without it. This expression is the same as "to let's hang out".

Example: *What are you doing tonight? Let's chill!*

To chill out can also be used in another meaning. Sometimes people become very excited, angry, puffed up and they accordingly need what is called "calm down", and in the language of the street it sounds "chill out" – to calm down.

Example: *Chill out. He won't bother you any more.*

6. **On Fleek** means "high level", "perfect".

This rather stupid word used by frivolous teenagers means any number of things, including phrases that already have on-point definitions.

Example: *Look, today my eyebrows are on fleek!* (Look, my eyebrows look just perfect).

7. **A creep** is an unpleasant, strange person, eccentric.

In American slang, *creep* is an adjective and is used in relation to faddish, strange or just unpleasant people. Although this word may be very offensive, yet sometimes it is used as a joke, in the meaning of "freak".

Example: *At first he seemed to be a creep, but it soon appeared that he is a pleasant and interesting person.*

8. **A hotshot** means "a successful person" or "someone with exceptional skills in a certain field"

It is commonly stated that this is term is naval in origin and refers to the practice of using heated shot to set ships afire. This is almost certainly not the case. None of the early figurative uses are from naval sources or contexts. And while

naval texts can be found that use the words “hot shot,” these are invariably in a quite literal sense, not a metaphorical one.

Example: *That guy thinks he's a real hotshot.*

She sure was a hotshot on the keyboard, 93 words per minute!

Thus, recently there has been a noticeable tendency that colloquial English gradually follows the path of simplification. It will be extremely interesting for people learning English to try to understand the nuances of everyday slang, which sooner or later they will have to face. The fact is that many well-known words can acquire a completely different meaning in slang expressions, and even a true professional translator may not understand a person's speech from the states of Colorado, Texas or any other, as the language is somewhat different in each particular region. It's all about everyday slang.

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TRADITIONAL ENGLISH DISHES

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Have you ever wondered how much time you spend on food? If you think about it you will understand what a big and important role it plays in our lives. In addition, food is a large part of culture. Every country and nation has its own popular and traditional food. It is impossible to understand the culture of life of people in another country and especially another language without knowing such a major part of their lives. There are a lot of jokes and idioms based on traditional food. For example, imagine how awkward it will be if you get a chance to talk to a native speaker and you do not get his joke because you do not know that the truffle is a dessert and it does not need to add meat. Since many people nowadays learn English it will be relevant to talk about traditional English food.

At the beginning let's talk about the traditional food that the British eat every day. They could start their morning with a nourishing English Breakfast or as it is often called a "full English". It consists of bacon, sausages and poached or scrambled eggs, fried or grilled tomatoes, buttered toast and a beverage such as coffee or tea. It may also include baked beans, cooked tomatoes and bubble and squeak, but these are very peculiar dishes. The same common dish in England is fish and chips. This dish is so popular not only among the British but also among

tourists because it is the most basic and hearty meal to take away in the UK. There is also a special dish for Sunday lunch, which the British spend with their relatives. It is a roast beef served with Yorkshire pudding. It is very unusual that the pudding is eaten with the main dish and as a dessert at the same time. Generally, it looks like a tart, but is made of a different kind of dough. You may never have heard of the other two dishes, but you must try them if you ever plan a visit to England. There are Shepherd's Pie and Cottage Pie. Even if they are called pies, they are not in the usual sense of bakers. The ingredients are laid out layer by layer as in the ordinary casserole with meat and mashed potatoes. Both pies are almost the same, the only difference is the types of meat in them: lamb in the first pie and beef in the second pie. So when you order them, don't expect to see dessert.

Nowadays, holidays still play an important role in everyone's life. They are an opportunity to gather with family and friends, talk heart to heart and also eat a delicious food. But many do not even know that the recipes of the dishes that they put on their tables were invented centuries ago and could even have the meaning within a certain holiday. They represent the customs and habits of our descendants.

First of all, let's talk about the traditional English Christmas table. Based on the experience of watching Christmas movies you may know that the main course on the table is turkey. People often buy a frozen turkey, thaw it, and then roast it in the oven for a couple of hours before adding sauces. You could serve it with a roast potatoes. These are often cut into small squares, and put into the oven with a bit of olive oil drizzled on top, along with herbs such as parsley and thyme, and salt and pepper. Besides, a way more healthy additions to turkey will be a Brussel sprouts. Not everyone loves it, but still it is a traditional dish on the Christmas table. In addition, if you bake it with spices, sauces, cheese and even brown sugar, even children will like it. A holiday is not a holiday without dessert. And the English know a lot about it. For example, they have a traditional dessert called truffle. It is made from custard, sponge cake, fruit, jelly, and whipped cream. All of the ingredients are placed into a bowl, layer by layer. If you have a sweet tooth at the table, he will definitely highly appreciate it. The next one is mince pies. They are tiny pies that are filled with fruits, nuts and spices such as cinnamon. Once they are baked, they are dusted with a little icing sugar and ready to eat. They are a nice finish to a delicious Christmas dinner.

Another essential holiday is Easter. On this holiday the table is usually filled with a variety of types of desserts. First of all, it is a traditional hot cross bun. These buns are meant to represent the moon and the cross symbolized the moon's quarters. To Christians, the cross symbolizes the crucifixion, making these yeast rolls perfect for the holiday. What makes these rolls unique and truly British is that they are filled with dried fruits, candied peel and cinnamon. The other dessert on the table is Simnel cake. It signifies the end of Lent, the period of 40 days when certain food is not eaten. It comes before Easter. The Simnel cake is rich with fruits, spices, and marzipan, all forbidden during the period of Lent. Some households add designs or little Easter eggs to the top of the cake to make it truly festive. The last but not least are jam tarts. The tarts came about when sugar was

used for making jam and remained popular in the UK ever since. You can use one jam flavor or a variety in different colors. You can also fill the mini tart shells with lemon curd if you prefer.

The third holiday is May Day. In England, the celebration of this holiday is similar to the celebration of Maslenitsa in Russia. But they differ significantly by treats on the tables. In the UK, traditional desserts are strawberry and ricotta muffins and Maids of honour cakes. The last ones are small round puff pastry cheesecakes, sometimes flavoured with almonds and rose water.

Another festival you have definitely heard about is Halloween. This is quite a spooky holiday so it is especially important to have a full table of different dishes. Many people might think that the only traditional things you could eat on Halloween are candies and pumpkins. But in fact, the British have their own delicious traditional dishes. Firstly, it is boxty or as they are usually called potato pancakes. In fact, they have the same recipe as draniki. The second one we could eat every day, but boxty is a festive dish. The next traditional meal is colcannon. It is a wonderfully green-streaked mix of mashed potato and different types of cabbage. An old Irish tradition is to serve Halloween Colcannon with a ring and a thimble, and maybe some coins too. If you get a ring it says you'll be married within the year; the thimble that you'll die alone. What the coin symbolises is unclear. It has already been said above that candies are not the only desserts on Halloween night. In England, there are soul cakes, which may look as ordinary cookies, but it is one of the important symbols of the holiday. They are topped with the mark of a cross before baking to signify that these were alms. Soul cakes were traditionally an offering for the dead as in early Christian tradition. Secondly, it is a toffee apple. These are a common treat at autumn festivals because autumn is a great harvest of apples. The whole apples covered in a hard toffee or sugar candy coating, with a stick inserted as a handle. You can also see this dessert on the table on the bonfire night. You could find a similar dessert in other cultures, such as Chinese.

If you have watched the new series on BBC "Sherlock" or "V for Vendetta" you might have heard about the next holiday. It's Guy Fawkes night or also called Bonfire night. Since it is celebrated on the night of November 5 around the bonfire, traditional dishes can be easily taken from home as a snack. First of all, it is traditional bonfire toffee also known as treacle toffee and plot toffee. No Guy Fawkes night would be complete without it. Treacle toffee is easy to make but the toffee needs to reach incredibly high temperatures so take care when making it. The recipe is so named because it includes black treacle, which is similar to molasses but less bitter. It is a thick, dark syrup that is often used in dessert recipes. The next one is Yorkshire parkin. This cake is sticky and moist, with the warm flavors of ginger, nutmeg, mixed spice, and black treacle. You can also make a biscuit version of parkin, which is basically a cookie that will start off firm but will turn sticky as it sits. The last one is traditional flapjacks. It is a perfect snack for a Bonfire night as it can be made in advance and is a small and very easy to eat.

British flapjack is a soft, chewy, cake-like bar made from oats, fruits, and golden syrup or treacle.

In conclusion I would like to add that almost all the traditional dishes which were discussed above are not difficult to cook. Although they are traditional for England, you can easily add them to your ration.

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ENGLISH FICTIONAL CHARACTERS AS ROLE MODELS FOR THE YOUNGER GENERATION

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Do you remember the book which made the greatest impression on you when you were a child? Do you remember the character in this book that you wanted to be like? I am pretty sure the kids who grew up in the '90s and '00s will mostly name a character from the Harry Potter series. But this, of course, is not the most popular answers. Recently, the famous British newspaper “The Guardian” published a list of 20 characters which are mostly loved by children from England. Winnie the Pooh, Charlie from “Charlie and the Chocolate Factory”, Doctor Who, Peter Pan, Cinderella and the others were in this list. Of course, Harry Potter was on the first place in the top. In my opinion, the younger generation should not forget about such famous heroes of books as Sherlock Holmes and Dr. Watson. Therefore, we will try to understand what kind of role models they are along with characters from a series of books by Joanne Rowling.

First of all, let's talk about the renowned characters of Sir Arthur Conan Doyle. Even if you have never read the stories about the adventures of Sherlock Holmes and Dr. Watson, you have definitely heard about them. When the first story appeared in 1887, it immediately attracted the attention of an adult audience. Every day the popularity of Sherlock Holmes only increased. Even when the author tried to get rid of his character, fans of detective stories wrote a huge number of letters to him and Sir Arthur Conan Doyle had to continue the story of a brilliant fictional detective. Centuries later, the popularity of Sherlock Holmes is not reduced. It has become part of the UK's cultural legacy. He is often referred to in other works, and his name has become a common name. What made him so popular? Of course his brilliant mind. Holmes attracts the attention of readers with his intelligence, reading, simple and even slightly comic approach to life and the ability to communicate with all people on an equal position. At the same time, Dr. Watson is almost the opposite of his friend. He is a real gentleman and a great friend. He is always kinder to people than Holmes. Watson also has a strong sense of honor. He is an excellent observer and often learns something from his friend. The stories mention that he even tried to solve crimes on his own, using Holmes's methods. Both of these characters are excellent examples of the fact that in life you constantly need to learn something new, not to be afraid of difficulties and understand that even the most impossible task has its own solution. I believe that a series of stories about Sherlock Holmes will appeal to the younger generation not only because it contains interesting detective stories, but also because it inspires self-development.

Further, let's talk about the characters in the series of books about Harry Potter. As the book covers the period of maturing of the characters, it's undoubtedly interesting to watch them. Many characters have changed a lot by the end of the story and this is a great example that it's never too late to get better. Neville Longbottom comes to mind first. He started out unsure and nervous, especially since he and his entire family had once thought he does not have magic abilities. However, after he was dropped out of a window by a delightful uncle and bounced back, the young wizard discovered he did have magic skills and thus he went to Hogwarts. He began to study hard, often helped friends to get out of troubles, struggled with shyness and fought bravely in the final battle for Hogwarts. Neville is a great example of how important friendship is, especially in difficult times. The next one is Hermione Granger. She is still a role model, especially for students. Her hard work, the desire to learn as much as possible about everything, a good heart and a serious approach to things make her not just a great character, but a hero. Her name became a common name. On the other hand, we can learn from the Weasley brothers how to look for the positive details in everything. They always tried to cheer everyone around. They even opened their own store of fun products, when life around became darker with each passing day. And last but not least is Harry Potter. He is strongly guided by his own conscience, and has a keen feeling of what is right and wrong. For the most part, Harry shows humility and modesty. He is also brave and selfless. Harry is a hero of a whole

generation. He would easily sacrifice himself for the good of others. Harry is a real example of how much you need to love your family and friends.

In conclusion I would like to emphasize that it is very important to show the young generation the right role models. Through the fictional characters it is easier to understand what is right and what is wrong.

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И.Н. Истягина

РОНАЛЬД УИЛСОН РЕЙГАН 40-ОЙ ПРЕЗИДЕНТ США

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Рональд Уилсон Рейган – 40-ой президент Соединенных Штатов Америки, 33-ий губернатор Калифорнии, а также известный актер.

Рональд Уилсон Рейган родился 6 февраля 1911 года в деревне Тампико, штат Иллинойс, США. Его отец, Джон Эдвард «Джек» Рейган, был ирландец, католического происхождения, работал продавцом, мать, Нелл Уилсон Рейган, имела английские и шотландские корни, была домохозяйкой и занималась воспитанием детей. У Рональда был также старший брат, Нил, Рейган который работал рекламщиком. [3, с. 5]

В 1930-х Рейган переехал в Лос-Анджелес, штат Калифорния. Свою карьеру он начал как актёр, снимаясь в кино, на телевидении, всего снялся в 52 фильмах и был избран президентом гильдии киноактёров США.

Позднее Рейган стал представителем корпорации General Electric, где и начал политическую карьеру. Первоначально он был членом Демократической партии США, но в 1962 году перешёл в Республиканскую партию. В 1964 году на партийной конференции Рональд Рейган произнёс свою знаменитую речь «Время выбирать» в поддержку республиканского кандидата в президенты Барри Голдуотера, после чего ему было предложено выставить свою кандидатуру на пост губернатора Калифорнии. Он победил на губернаторских выборах в 1966 и 1970 годах.

В 1980 Рональд Рейган году выиграл первичные партийные выборы, став кандидатом в президенты от Республиканской партии и на последующих выборах победил кандидата от Демократической партии, действующего президента Джимми Картера. В 1980 году он победил на президентских выборах и в январе 1981 года вступил в должность 40-ого президента США.

Существует много интересных фактов о жизни Рейгана, его достижениях и политической карьере.

Прозвище Рейгана «толстячок-голландец» было дано ему в раннем возрасте его отцом.

С раннего возраста отец называл его «толстячок-голландец», в последствии это прозвище осталось с ним на всю жизнь.

Первая его профессия была спасатель.

В 1926 году Рональд Рейган устроился на свою первую работу — спасателем на реке Рок Ривер в парке Лоувел, где он спас 77 жизней.

Рональд Рейган был первым президентом, который развелся.

Первая жена Рейгана, Джейн Уайман, была известной актрисой. Она снималась в кино и на телевидении. Они развелись 28 июня 1948 года.

На него было произведено покушение, через два месяца после вступления в должность.

30 марта 1981 года Джон Хинкли-младший стрелял в Рейгана. Пуля попала в легкое.

Он страдал от болезни Альцгеймера после президентства.

Во время второго срока правления в качестве президента, Рейган объявил о своей болезни Альцгеймера в 1944 и ушел из общественной жизни. Умер Рональд Рейган 5 июня 2004 года в возрасте 93 лет, у себя дома в Бель-Эйр в Лос-Анджелесе, от воспаления легких и обострившейся болезни Альцгеймера.

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БРИТАНСКАЯ КОРОЛЕВСКАЯ ГВАРДИЯ

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Британская Королевская гвардия - это охрана монаршей семьи, которая находится в подчинении у Министерства обороны. В ее состав входят пять пехотных полков и два конных. Пешие гвардейцы носят красные мундиры и черные головные уборы. Различить полки можно по расположению пуговиц на одежде и цвету кокарды на шапке. Смена караула в Букингемском дворце и в Сент-Джеймсе является почетным символом британской монархии и прекрасным примером британской пышности. Каждый турист, побывав в Лондоне, обязан увидеть церемонию смены караула, которая является местной достопримечательностью.

Круглосуточно пехотные гвардейцы охраняют Букингемский дворец, другие королевские резиденции, а также хранилище королевских регалий в Тауэре. Когда королева Елизавета находится в Букингемском дворце, его ворота охраняют четыре гвардейца, когда она отсутствует — только два. Часовые стоят на посту по два часа, затем четыре часа отдыхают. А конные гвардейцы сменяют друг друга каждый час, поскольку лошадь дольше часа неподвижно стоять не может.

Гвардейцы могут похвастаться завидной выдержкой. Подходить к солдатам можно достаточно близко, а они в свою очередь не имеют права вступать с посторонними в диалог. Однако бывали случаи, когда гвардейцам приходилось ставить надоедливых туристов на место. Один из таких инцидентов произошел этим летом, когда турист коснулся плеча гвардейца и тот направил на парня оружие.

Во время службы солдаты королевской гвардии даже не имеют права вступать в диалог друг с другом. Из-за теплой униформы, а особенно шапки, которая весит около трех килограммов, гвардейцы часто теряют сознание. В таких случаях им даже не могут помочь сослуживцы, так как обязанность солдат — стоять неподвижно.

Отдельного внимания заслуживает оркестр королевской гвардии Великобритании, который то и дело удивляет весь мир выбором музыкальных композиций. К примеру, в 2007 году, во время государственного визита короля Саудовской Аравии в Великобританию, оркестр уэльской гвардии вместо традиционного гимна сыграл «Имперский марш» из «Звездных войн». Во время смены караула можно также услышать песни «Битлз» в исполнении оркестра и многие другие известные мелодии.

Стоит отметить, что помимо безукоризненного выполнения церемониальных обязанностей, королевские гвардейцы отлично показывают себя в боях. Они прекрасно натренированы и владеют всеми необходимыми навыками. Служащие Королевской гвардии принимали участие во всех войнах и боевых операциях, в которых участвовала Великобритания. А это значит, что до сих пор служба гвардейцев Дворцовой дивизии является эталоном образцовой армейской подготовки и дисциплины.

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А.С. Крупяков ОСОБЕННОСТИ НАЦИОНАЛЬНОЙ КУХНИ НЕМЦЕВ ПОВОЛЖЬЯ

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Каждый народ чтит и передает из поколения в поколение не только обычаи и обряды, но и кулинарные традиции. Являясь неотъемлемой частью культуры, национальная кухня отражает историю, условия жизни, менталитет и национальный характер народа. Данная статья посвящена особенностям национальной кухни немцев Поволжья.

Старинная пословица гласит: «Скажи мне, что ты ешь, и я скажу, как ты живешь». В нашем случае можно добавить: «И где живешь». И в самом деле, если знать кулинарные традиции определенного народа, то легко можно догадаться и о местонахождении, и о климате страны, и о национальном характере. Флора и фауна диктуют выбор продуктов, а характер, темперамент и менталитет влияют на способы приготовления пищи. Из всех этих компонентов и складывается тот феномен, который принято обозначать понятием «национальная кухня».

Кухня немцев Поволжья является своеобразным зеркалом их истории. Наши предки приносили с собой из разных мест Германии свои обычаи и обряды, существенно отличающиеся друг от друга. Наряду с обычаями живущие в Поволжье немецкие крестьянки от поколения к поколению передавали кулинарные традиции своих предков и переняли именно в кулинарном искусстве больше, чем в других областях культуры и образа жизни.

Появлению немцев в России, в том числе и в Симбирской губернии, немало способствовали указы Екатерины II о льготных условиях переселения [2, с. 67]. Немцам гарантировались свобода вероисповедания и бесплатные земельные наделы, кроме того, они освобождались от воинской повинности на неограниченный срок и от налогов на 30 лет. Именно тогда из разоренной Северной войной Германии стали прибывать к нам первые группы переселенцев. Поволжье стало для них второй родиной. Как свидетельствует первая всеобщая перепись населения Российской империи 1897 года, в Симбирской губернии в то время проживало 1040 немцев. К началу 20 века насчитывалось уже 190 колоний с населением 407,5 тысяч человек

преимущественно немецкой национальности. Официально жителей всей этой территории с конца 19 века стали называть «немцы Поволжья» или «поволжские немцы» (die Wolgadeutschen).

Поволжские немцы свято хранили и соблюдали свои обычаи и традиции, передавали их из поколения в поколение. Однако полностью избежать влияния традиций местных народов им не удалось. В том числе и на кухню. Как отмечает Инга Томас, единого меню у поволжских немцев не было. Его региональные особенности определялись, во-первых, кулинарными традициями тех германских земель, откуда они были родом, а, во-вторых, условиями жизни на новом месте [5]. Однако некоторые блюда были известны практически всем поволжским немцам. Перечислим некоторые из них:

1. Nudelsuppe (куриный суп-лапша). Это блюдо было настолько почитаемо немцами что, несмотря на обилие макаронных изделий в магазинах, лапша для него изготавливалась только домашним способом.

2. Eisbein mit Sauerkraut und Kartoffelpüree (окорок с тушеной квашеной капустой и картофельным пюре). При этом приготовление картофельного пюре считалось особым искусством – в него добавляли большое количество молока и масла и долго взбивали до консистенции легкого крема.

3. Strudel (Штрудель). В современной кулинарии штрудель – это слоеный рулет с яблочной или вишневой начинкой. Поволжские немцы называли штруделем сдобные рулетики, которые вместе с окороком или салом тушились в квашеной капусте.

4. Knödel / Klöße (клёцки, галушки). В кухне немцев Поволжья существовало множество рецептов приготовления этого блюда. Их добавляли в суп, ели в качестве самостоятельного блюда со сметаной, маслом и шкварками, а также варили на костре в полевых условиях во время сельскохозяйственных работ. Особый вид галушек представляли собой Hefenklöße – дрожжевые кнедлики, для приготовления которых скатанное в шар, весом около фунта, тесто варили в котле и ели в растопленном соусе из масла и арбузного меда [1].

5. Wurst (колбаса). При первых заморозках в каждом дворе резали свиней и выделывали колбасы, которые потом употребляли как в холодном, так и в жареном виде. Зажаренная в тесте колбаса считалась праздничным блюдом.

6. Riwwelkuchen (сдобное печенье, посыпанное крошкой из теста). Рецепт этого печенья, известного в современной кулинарии как «штройзелькухен», до сих пор пользуется популярностью.

7. Schnittsuppe (десертный суп из сухофруктов, иногда с добавлением маленьких клецок).

8. Prips (кофе из злаков (ячменя, ржи, пшеницы) или цикория). Многие немцы Поволжья принадлежали к беднейшим слоям населения и довольствовались дешевой имитацией настоящего кофе, используя зерна ячменя и пшеницы. Традиционный утренний кофе они готовили из

обжаренных и смолотых зерен пшеницы, ржи, овса, ячменя, добавляя для вкуса и запаха обжаренные семечки дыни.

Пища поволжских немцев отличалась обилием и разнообразием. Объяснялось это их огромной трудоспособностью, которая, в свою очередь, была следствием качественного и полноценного питания. Эту взаимосвязь отражают две немецкие пословицы: «Wie zur Arbeit, so zum Essen» и «Wie zum Essen, so zur Arbeit» (Как поработаешь, так и поешь / Как поешь, так и поработаешь). Каждая трапеза была чем-то вроде ритуала, где вся, часто многочисленная, семья собиралась за столом. Она заканчивалась благодарственной молитвой.

По рассказам Я.Е. Дитца, ели колонисты три-четыре раза в день. Завтрак состоял обыкновенно из ароматного, приторно-сладкого жидкого состава, называемого черным чаем, который варился в котле на воде из смеси толченого корня солодки, цвета липы и шиповника, душистой ромашки и душистого чабреца или своеобразного белого кофе, сваренного на молоке из жженой пшеницы, и белого калача. Иногда на завтрак ели пшеничный, картофельный или какой-либо мучнистый суп.

Обед состоял из одного блюда: вареной свинины, жаркого, жареной колбасы или сала с картофелем, галушками или лапшой на масле. В праздники в качестве десерта был сладкий суп, сваренный на арбузном меде из сушеных яблок, груш, вишни, изюма, слив и кураги.

К ужину подавались многочисленные супы с картофелем, пшеном, горохом, бобами, чечевицей, капустой, галушками, мучной затиркой и лапшой, заправленные маслом или салом, холодная ливерная колбаса или кусок тонкого сушеного или копченого сала, прорезанного в виде пальцев до кожицы.

Осенью по праздникам готовились жареные курица, утка, гусь или индейка, начиненные составом из тертого калача, изюма, сметаны, яиц и сливочного масла. В период поросят жарился поросенок с начинкой из картофеля и тертого калача. Соленые огурцы и арбузы подавались к кушаньям осенью и зимою, большей частью в праздники; летом их ели в свежем виде, а также готовили салаты на кислом молоке и яйцах из огурцов и салата. Зимой к завтраку подавали заготовленный летом сушеный сыр с отвратительным запахом (Stinkkäse); летом же из творога варили в котле на масле и яичном желтке особый вкусный сыр, называемый вареным (Kochkäse). Летом, в сезон фруктов, пекли пироги, начиненные фруктами, а к завтраку жарили в кипящем масле особые пышки – Küchelchen [1].

К особым событиям готовили специальные блюда. Например, по случаю свадьбы варили традиционный суп (Hochzeitssuppe) из курицы или фарша, добавляя кукурузу, морковь и обязательно свежий укроп [4].

Людам, которые впервые пробовали немецкую пищу, она часто казалась странной. Русский литератор Александр Чужбинский так описывал свои впечатления от немецкой кухни: «Едва я положил свою дорожную сумку, как увидел на столе миску. К моему удивлению, в ней находилось молоко вместо

обычного супа. Оно имело отвратительный вкус, однако скоро я ловил ложкой со дна вишни и спрашивал: «Что это?» «Суп из вишен», – отвечала хозяйка. Утолив голод, я попросил попить. Мне подали стакан сливок. Основным блюдом была ветчина, такой жирной и вкусной я не ел никогда в жизни. За ветчиной следовало жаркое со сладким соусом. На другой день мне подали грушевый суп. На третий день был суп с картофелем, который сначала был обжарен в масле, а затем сварен в молоке». После нескольких подобных обедов русский гость почувствовал себя плохо и поспешил покинуть гостеприимных хозяев [5].

Кулинария оказалась одним из самых устойчивых элементов культуры поволжских немцев. Даже в семьях, утративших язык и религию предков, нередко продолжают готовить традиционные немецкие блюда. С другой стороны, благодаря переселенцам, вернувшимся на свою историческую родину, многие оригинальные рецепты блюд, которые передавались из поколения в поколение поволжскими немцами, вновь добрались до Германии. «Круг замкнулся», – так охарактеризовал ситуацию Йохен Брукер, благодаря усилиям которого в Германии ежегодно с 2011 года проводится «Международный фестиваль супа». Участники этого праздника – это поволжские немцы, сохранившие уникальные рецепты приготовления традиционных немецких блюд и готовые поделиться ими и историей их возникновения со всеми желающими [4].

Таким образом, ознакомление с уникальными кулинарными традициями немцев Поволжья, подчиненными четким правилам и канонам и одновременно представляющими собой кулинарное смешение, помогает познать историю, лучше понять национальный характер и менталитет этого народа, что очень важно для межкультурного понимания.

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Д. Р. Султанова
**NATIONAL MENTALITIES OF RUSSIAN AND AMERICAN
PEOPLE**

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The process of globalization has touched all countries on the planet and it is difficult to find a place where people would differ so significantly in their lifestyles as they did a couple of decades ago. Now going abroad, few people are surprised by the subway map, supermarkets, ticket-buying devices in the metro, etc. Life all over the world is the same. It seems that we are all the same, but there are still differences. Each country has its own customs, its own culture and traditions. Globalization and neighboring countries affect the cultural development of people. All of this changes the worldview of people, and over time different mentalities appear.

All people whether they live in Russia or the United States, in fact, have the same fundamental values and principles: they are also looking for love, want to be young, healthy and beautiful, successful, take care of their children, and strive for a dream. People tend to feel happiness, sadness, joy, anger, etc. At the same time, social conditions and culture have great influence on people's way of thinking. This is where the difference in mentalities appear, which can give rise to misunderstandings in relationships with people living in other countries. It is especially important to understand the mentality of a foreign husband or wife, so that relationships bring joy and harmony.

In this article we will describe how the mentality of the Russian people and the Americans differ. Thus, for some people something is the norm of life since childhood, for others it is puzzling and even irritating.

To begin with, these two nations are very different from each other due to the presence of opposing ideologies. One of the reasons for the difference is the Soviet past. Collectivism is still present in Russia, while individualism is present in the USA. Since childhood Americans are not afraid to dream and set ambitious goals. Children of these two countries are brought up on the basis of different tales and stories. In Russia they say: "You want a lot, you will receive a little", in America – "Dream of the impossible, you will achieve a lot".

1. Following the law is the first difference of mentalities. Americans are born and live according to the principle: "Nobody is above the law, be prepared for serious consequences". In the US, the implementation of laws is carried out strictly and equally for everyone regardless of their status. Therefore, Americans are mostly law-abiding, even in small things. The consequences for violating the law are much more serious than the advantages obtained as a result of its violation. Therefore, residents of the United States prefer living according to the rules established by the State in order to avoid the risk of being caught in illegal activities.

Americans have more respect for the law. Even in ordinary things, for example, in schools or universities it is almost impossible to cheat, because almost every classmate will tell the teacher about it. The society encourages it, even in public transport there are posters with the slogan: "If you see something suspicious, report it." Here it performs the self-organizing function of society, it itself neutralizes offenders, and as a result there are fewer of them.

For a Russian person living by the rules most often seems "boring". Restrictions and setting boundaries cause internal protest in the independent Russian soul. The low level of trust of Russian citizens in the system of government creates people's desire to circumvent the law in order to protect their own interests. Russian people are known for their ingenuity and creative approach to solving various issues. It is difficult for them to understand why it is necessary to act strictly according to plan, when it is possible to find other options.

2. Politeness and smiles is the second important difference. Since childhood American society teaches to respect foreign territory, the integrity and the human right to be different in appearance, language, religion and worldview. Showing obvious surprise, neglect and other emotions towards other people is a sign of bad manners. Americans understand that any issues are easier to solve if people are positive towards each other. Therefore, "business smiles" are accepted as the generally accepted norm of behavior of an educated person. Americans try to seem emotionless even during conflict situations and do not raise their voices when talking with opponents.

Expressiveness of speech, raising the voice during the conversation, the absence of a smile and a friendly facial expression are perceived by Americans as something alarming and aggressive. For Russian people, a smile is always associated with an expression of sincere joy. A Russian person often does not agree to smile only as a courtesy. In a conversation with unfamiliar people Russian people can be very expressive, and it is considered to be a usual thing, unlike the Americans, who are against having heated discussions.

3. Privacy and Attitude to personal life. Americans are very careful about their personal lives and do not like to talk about personal things, especially when dealing with unfamiliar people. Too personal and intimate questions for Americans are the questions: "Are you married? (Married?)", "Do you have a girlfriend (boyfriend)?", "What brand of car do you have?", "Where do you live?", "How much do you earn?", "Do you believe in God?", "What do you do?".

Questions and comments about appearance, dressing, age, etc. are considered indecent. Americans are less concerned about appearance, clothing, etc. since they consider that "content is more important than form", therefore, Americans often look untidily that a Russian person is confused. Appearance from a Russian person standpoint is a reflection of his personality and self-respect. Russian classical literature says that "everything must be beautiful in a person"!

Americans are quite sociable and easy to get in touch with unfamiliar people and love to start talking about sports, politics, business, and economics.

For the Russian person, on the contrary, a heart-to-heart talk is very important and practically necessary. It is quite common to share secrets of personal life or family problems with an unfamiliar person. Russian people sincerely try to understand the problem of the opponent and sincerely empathize. As a rule, the innocent question of marital status does not offend anyone.

4. Attitude to time. As for the agreements, meetings at the appointed time, as a rule, Americans are punctual and take it very seriously. The lifestyle in American supercities such as New York, Boston, and Chicago set the business-like tone. People are busy and every hour is filled in advance. Americans understand this and respect each other's time. Therefore, a lack of punctuality and irresponsibility affects the business reputation of a person.

As for written agreements, contracts, etc. - this is a foundation that Americans clearly adhere to and do not allow when people break their agreements. It is for this reason that lawsuits are so common in the United States.

Russian people are quite loyal to changes in arrangements and meetings at the last moment. Often arrangements may vary in the process. Many business processes in Russia rely on trust rather than on legal contracts. Punctuality and strict complying with the deadlines are often not included in the priority tasks of the Russian person. This is a significant difference in the mentality of the two peoples which can cause confusion.

5. Attitude to the environment. Americans pay special attention to environmental protection, and each person understands his personal responsibility for the respect for natural resources, and proper waste disposal. Almost every American is calm about the sorting of garbage at home. Everyone knows where to return recycled batteries. Such a scrupulous attitude to the environment of Americans is also explained by the fact that they carefully monitor their health and are especially attentive to everything that can do harm to their physical health. Starting from kindergarten, children are taught to respect natural resources, in particular drinking water, using the example of arid regions of Africa. Adults explain children the importance of competent disposal of chemical, technical objects that can release toxic or radioactive substances.

In Russia, the culture of waste disposal is not so common. According to the Russians, there are more important tasks needed to resolve than the recycling of waste and disposal. In the minds of the Russians, this issue is not a priority in the list of important tasks. Therefore, there are significant differences in attitude to this issue among Americans and Russians.

6. Attitude to money and wealth. Americans and Russians are fundamentally different in this problem. The United States, especially New York, is known for its number of billionaires living there. A notable feature of Americans is that they prefer not to advertise their wealth, not to stand out. This feature is explained by the upbringing, culture, and goes back to the days of the English, European colonizers of aristocrats who occupied the American continent at the time of the discovery of the New World. Holders of the so-called "old money" have the style of behavior that has developed over the centuries in their families.

Also in the USA there are a lot of immigrants from the third world who have earned their fortunes in America thanks to their unique ideas and intellectual abilities, the so-called “new money”. Since the newly-made billionaires themselves once came out of poor families, they do not “show off” their wealth. Moreover, very rich people in the United States approach spending very efficiently. This is due to the fact that Americans are often guided by the principle: “Money is a blessing from above, so you need to spend it wisely. Money loves silence.”

In Russia, on the contrary, rich people love to show their social status. Russian people tend to be generous and spend money widely sometimes without even thinking about tomorrow. Such an approach is generally unofficially welcomed, and is endorsed by the public.

Such fundamental differences between the Russian and American people again go as far back as ancient history and cultural features. The Asian-Eastern culture had a great influence on Russia. The close proximity to Central Asia explains the Russian people's love of luxury and generous attitude to money. But often it is a misunderstanding in matters of money gives rise to resentment and disagreement between spouses.

There are a lot of examples of the difference. Thus, we can only say that America and Russia are two opposite banks, which are separated by a huge river. There are so many differences of mentality that it can seem that there are no similarities, although they exist. In any case, there is nothing bad in the variety of peoples' life; it only means that the world is unique.

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А.А. Тулисова

15 UNGLAUBICHE MEISTERWERKE MODERNER ARCHITEKTUR IN DEUTSCHLAND, DIE SIE KENNEN MÜSSEN

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Deutschland blieb im Laufe seiner Geschichte ein entwickelter, reicher Staat, in dem stets modernste Bautechnologien zum Einsatz kamen. Ein Überblick über 15 ungläubliche Meisterwerke moderner Architektur in Deutschland zeigt deutlich, dass dieses Land immer noch zu den Weltführern gehört. Und hier gibt es 15

unglaubliche Meisterwerke moderner Architektur in Deutschland, die Sie kennen müssen.

1. Adidas Hauptsitz in Herzogenaurach

Im weißen Gebäude des 2011 errichteten Hauptsitzes des Sportgiganten "Adidas" in Herzogenaurach wurden günstige Voraussetzungen für fruchtbare Forschungsarbeiten von 1.700 Mitarbeitern des weltbekannten Unternehmens geschaffen. In diesem modernen Gebäude können Sie sehen, dass alle Hauptzonen durch spezielle Passagen miteinander verbunden sind, die der Schuhschnürung ähneln. Dafür erhielt das Gebäude selbst den Spitznamen "Laces". Das Innere des Gebäudes zeichnet sich im Allgemeinen durch eine außergewöhnliche Leichtigkeit und eine hervorragende Ausleuchtung aus, die zur produktivsten Arbeit beitragen.

2. Vitra Design Museum in Vejle am Rhein

In den frühen 80er Jahren zog Vitra, der weltweit für seine hochwertigen Möbel bekannt ist, die vielversprechendsten Architekten an, einen modernen Kulturkomplex mit vielen Gebäuden in der deutschen Stadt Vejle am Rhein zu schaffen. Das nach dem Entwurf des amerikanischen Architekten Frank Gehry, dem Genie der Dekonstruktion, errichtete Gebäude besteht aus einfachen geometrischen Formen, die durch weiße Gipsflächen und ein Metaldach miteinander verbunden sind.

Allianz Arena Fußballstadion in München

Das luxuriöse Stadion "Allianz Arena" mit einer Kapazität von 75 Tausend Menschen wurde eigens für die Weltmeisterschaft 2006 im Norden Münchens errichtet. Neben dem Fußballplatz und den Ständen beherbergt das Stadion viele Cafés, Restaurants und Kioske, 2 Kindergärten / erweiterte Tagesgruppen, den LEGO-Markenshop und den Clubshop sowie das Museum der dortigen Bayern-Fußballmannschaft. Auf dem Territorium dieser hochmodernen Sportanlage gibt es ein vierstöckiges Parkhaus für 9.800 Autos, eines der größten in Europa. Die ursprüngliche Form des Stadions war der Grund für das Auftreten vieler spielerischer Spitznamen: wie "Schlauchboot", "Autoreifen" und "Luftkissen". Heute gilt die Allianz Arena nicht nur in München, sondern im ganzen Land als eine der wichtigsten Strukturen.

4. Interaktives Museum und Ausstellungszentrum "Universum" in Bremen

Das interaktive Museum und Ausstellungszentrum "Universum" wurde im Jahr 2000 in Bremen eröffnet. Im "Universum" kann sich jeder Besucher als Entdecker sowohl der umliegenden Welt als auch sich selbst versuchen. Das wichtigste Highlight des Museums und des Ausstellungszentrums ist eine einzigartige Ausstellung, die sich der Menschheit, der Erde und dem Weltraum widmet. Die Form dieses luxuriösen Gebäudes aus Beton, Stahlträgern, Holzkonstruktionen und Edelstahl ähnelt einer riesigen Muschel oder einem Wal. Die unglaubliche Popularität von "Universe" bestätigt die Tatsache, dass das Museum jedes Jahr etwa 450.000 Besucher aus der ganzen Welt empfängt.

5. Philharmonie in Berlin

Eine der berühmtesten Konzertsäle Deutschlands, die Berliner Philharmoniker, wurde 1963 eigens für die dortige Philharmonie erbaut. Die

Berliner Philharmonie ist Teil des berühmten Kulturforum, zu dem auch Objekte wie die Neue Nationalgalerie, der Potsdamer Platz und das zweite Gebäude der Staatsbibliothek gehören. Ein Gebäude aus Beton aus der Ferne zieht die Aufmerksamkeit zahlreicher Touristen an. Die asymmetrische Form erinnert an ein Zirkuszelt. Die Grand Philharmonic Hall mit originellem Interieur und Bühne in der Mitte des Raums bietet Platz für 2.440 Personen und ist die größte Konzerthalle in Berlin.

6. Kino "UFA-Palast" in Dresden

Das unglaublich deformierte Gebäude des UFA-Palastes in Dresden ist ein Projekt, das für seine Zerstörungsphilosophie des österreichischen Architekturbüros Coop Himmelb (l) au weltbekannt ist. Der riesige Komplex besteht aus zwei Objekten, die untrennbar miteinander verbunden sind - ein Kino mit 8 Räumen, in dem 2.600 Besucher gleichzeitig empfangen werden können, und ein "Kristall" einer Glasumhüllung, die als Lobby und öffentlicher Raum dient.

7. BMW Automobilwerk in Leipzig

Für die Gestaltung des einzigartigen Bürogebäudes des Autogiganten BMW wurde die renommierte britische iranische Architektin Zaha Hadid 2006 mit einem der renommiertesten europäischen Architekturpreise, RIBA, ausgezeichnet. Der 2005 in Leipzig errichtete Komplex zeichnet sich durch eine glatte und sehr stilvolle Struktur aus, die neben der künstlerischen auch die Funktion einer klaren Gestaltung und Verteilung der Produktionsprozesse im Innenbereich hat. Der Fabrikkomplex besteht aus drei Gebäuden, von denen eines die Rolle des Hauptförderers spielt, in dem anderen sind Hilfsgeschäfte, und das dritte verbindet sie miteinander.

8. Bürogebäude The Sqaire in Frankfurt am Main

Das Bürogebäude The Sqaire wurde 2011 in Frankfurt am Main errichtet. Die ersten Stockwerke dieses riesigen Gebäudes mit einer Länge von 660 m, einer Breite von 65 m und einer Höhe von 45 m befinden sich oberhalb des bestehenden Bahnhofs in der Nähe des internationalen Flughafens. Diese unglaublichen Dimensionen haben The Sqaire zum größten Bürogebäude in Deutschland und zu einem der wenigen "Land Scraper" ("Recumbent Skyscraper") der Erde gemacht. Das Sqaire ist über eine Fußgängerbrücke mit dem Terminal 1 des Frankfurter Flughafens verbunden. Interessanterweise ist der Name des Komplexes The Sqaire ein Spiel zwischen den englischen Wörtern Quadrat (übersetzt aus dem Englischen. Platz) und Luft (übersetzt aus dem Englischen. Luft, Luft).

9. Multifunktionales Messezentrum "BMW World" in München

Der Gewinner des Wettbewerbs für den Bau des Ausstellungszentrums BMW Auto Giantro aus den frühen 2000er Jahren war das Büro Himmelb (l) au aus Österreich. In ihrem Projekt haben die Architekten ein Raumkonzept vorgeschlagen, das sowohl zu einem „Showroom“ als auch zu einem Verhandlungsort zwischen den Vertretern des Konzerns und seinen Kunden wird. Das architektonische Hauptmerkmal des Projekts war ein riesiger Trichter aus Glasblöcken. Besucher haben das Gefühl, dass ein in den Himmel schwebendes Dach in diesen Trichter gesaugt wird. In den Wänden des Ausstellungszentrums

gibt es sowohl ein Autohaus als auch Nebeneinrichtungen: ein Museum für Kfz-Betrieb, ein Café, ein Restaurant und mehrere Konferenzräume.

10. U-Bahnstation St. Quirin Platz in München

Die Station der Münchner Metro "St. Quirin Platz" wurde 1997 eröffnet. Der Autor des Projekts war das Architekturbüro Hermann + Ottl. Das Hauptmerkmal der U-Bahnstation "St. Quirin Platz" kann als riesiges Fenster in Form einer Muschel an der südwestlichen Seitenwand des Parks bezeichnet werden. Die Decke über der Plattform ist teilweise mit reflektierenden Aluminiumpaneelen mit zwei Lampenreihen ausgestattet.

11. Zentrum für virtuelles Engineering in Stuttgart

Das Gebäude des Instituts, das im Bereich der Arbeitsprozesse forscht, wurde 2012 in der deutschen Großstadt Stuttgart nach dem Projekt des niederländischen Büros UNStudio errichtet. Das Hauptziel der Architekten war es, einen einzigen Raum zu schaffen, in dem die Schüler lernen und Spaß haben und ihre Freizeit sinnvoll nutzen können. Deshalb hat das Team von UNStudio eine miteinander verbundene Laborkette entwickelt, Räumlichkeiten für kleine Studien, offene Ausstellungsflächen, Terrassen und Plätze, die die Struktur des Gebäudes bilden.

12. Multifunktionaler Komplex "Sony Center" in Berlin

Der aus sieben Gebäuden bestehende Sony Center-Komplex wurde im Jahr 2000 vom Architekten Helmut Jan im zentralen Berliner Bezirk entworfen. Der Bau dieses luxuriösen Ensembles kostete die Stadtkasse 600 Millionen Euro. Im Sony Center gibt es Büros verschiedener Unternehmen, Wohnungen, ein Kino, ein Unterhaltungszentrum, einen Supermarkt, Boutiquen, Cafés und Restaurants. Das Gebäude aus Glas und Stahl umfasst ein ovales öffentliches Forum, das nicht von den umliegenden Straßen getrennt ist. Die Dachstruktur des Forums ist eine unglaubliche technische Lösung. Das Walmdach ist auf einem Stahlring montiert, der auf den umliegenden Gebäuden liegt und soll den heiligen Berg von Fujiyama symbolisieren.

13. Die Zentrale der Bank "Commerz-Bank" in Frankfurt am Main

Das Hauptgebäude der größten deutschen Bank, das 1997 erbaut wurde, war bis 2005 das höchste in Europa und verlor den Ehrentitel des Hotels Triumph Palace in Moskau. Die Höhe des 65-stöckigen Turms beträgt etwa 259 Meter (zusammen mit der Antenne - 300 m). Wie in vielen Projekten des britischen Norman Foster wurde der Wolkenkratzer in Frankfurt sorgfältig durchdacht und entwickelte ein natürliches Licht- und Luftzirkulationssystem im Inneren des Gebäudes. Darüber hinaus organisierte der Architekt auf verschiedenen Etagen des Turms prächtige Wintergärten. Dieses Gebäude ist eines der wenigen Gebäude in Deutschland, in dem Stahl anstelle von Beton als Ausgangsmaterial verwendet wurde.

14. Die Kuppel auf dem Dach des Gebäudes des Deutschen Reichstags in Berlin

Eine der Hauptattraktionen Berlins wurde Ende des 19. Jahrhunderts errichtet. 1993 wurde jedoch ein Wettbewerb für Wiederaufbauarbeiten ausgeschrieben. Einer der Gewinner war der legendäre Norman Foster. Das Hauptmerkmal der

renovierten Fassade des Gebäudes war ein gewölbtes Glas- und Stahldach mit einem Durchmesser von 40 Metern und einer Höhe von 24 Metern. Die Besucher der Kuppel sind fasziniert von dem unglaublichen Lichtspiel, das durch Reflexionen von 360 Spiegeln erzeugt wird. Eine spezielle Verspiegelung trägt zur Reflexion und Übertragung von Licht in den Innenraum bei.

15. Wohnhaus "Dupli-Casa" in Baden-Württemberg

Das Dupli-Casa-Haus, das 2008 nach dem Entwurf des beliebten deutschen Architekten Jürgen Meier in Baden-Württemberg erbaut wurde, besticht durch seine unglaubliche Eleganz. Der Deutsche, der immer nur teilweise weiß war, gab seine Vorlieben bei der Gestaltung des Dupli-Casa nicht auf. Im ersten Stock des Hauses gibt es einen Erholungsbereich mit einem Pool und einem Schlafzimmer, der zweite Stock wird für Wohnzimmer und Küche genutzt, und der dritte umfasst drei Schlafzimmer, ein Gästezimmer und ein Arbeitszimmer. Eines der Hauptmerkmale des Hauses ist die maximale Offenheit, die durch eine große Anzahl von großen Fensteröffnungen und Terrassen erreicht wird.

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БИЛЛ КЛИНТОН-42 ПРЕЗИДЕНТ США

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Билл Клинтон – 42-ой президент Соединенных Штатов Америки, который работал с 1993 по 2001 год. Он был первым президентом-демократом, выигравшим переизбрание со времен Франклина Рузвельта. До избрания на пост президента он избирался губернатором Арканзаса пять раз с 1979 по 1981 и с 1983 по 1992 года.

Уильям Джефферсон Клинтон или Уильям Джефферсон Блайт III, более известный как Билл Клинтон, родился 19 августа 1946 года в Хоуп, штат Арканзас. Его отец, Уильям Джефферсон Блайт-младший (1918–1946), был коммивояжером, который погиб в автомобильной аварии за три месяца до рождения сына. Его мать, Вирджиния Делл (урожденная Кэссиди; 1923–1994), вскоре после его рождения отправилась в Новый Орлеан учиться медсестринскому делу. 11 октября 1975 года Билл Клинтон женился на Хиллари Родэм. Их единственный ребенок, Челси Виктория Клинтон, родилась 27 февраля 1980 года.

В 1992 году Клинтон победил в президентской номинации от демократов Джорджа Буша-младшего, и был избран на второй срок в 1996 году. Тогда США резко снизили внешний долг, безработица стала незначительной, администрация пролоббировала запрет на испытания ядерного оружия во всем мире. Отсутствие сопротивления со стороны СССР облегчило задачу расширения влияния руководства США во главе с Клинтоном и позволило добиться немислимых до сей поры результатов: четвёртого расширения НАТО и отделения Косова и Метохии от Югославии

после войны НАТО против Югославии в 1999 году. В период президентства Клинтона США значительно снизили объём военного вмешательства по сравнению с временами Рональда Рейгана и Джорджа Буша-старшего. На президента-демократа Клинтона американцы возлагали большие надежды как на реформатора консервативного общества США, отдельные граждане рассчитывали, что Клинтон снизит влияние религиозных конфессий и возобновит исследования в области генетики, замороженные республиканцами.

Клинтон - самый почитаемый президент за последние 25 лет. Почему он был так популярен, несмотря на то, что был импичмент? Прежде всего потому, что его экономическая политика создала десятилетие процветания. Во время его президентства:

- Создано более 22 миллионов новых рабочих мест, больше, чем у любого другого президента.
- Безработица снизилась с 7,5 до 4,0 процента.
- Домовладение было самым высоким показателем в истории (67,7%).
- Дефицит бюджета сократился до 290 миллиардов долларов. Баланс бюджета США составляет 128 миллиардов долларов.
- Уровень бедности снизился до 11,8 процента.

Что именно сделал Клинтон? Он принял сдерживающую фискальную политику. Во-первых, он поднял налоги с помощью Акта о сверке бюджета Омнибуса 1993 года, своего первого бюджета. Закон о сокращении дефицита поднял максимальную ставку подоходного налога с 28 до 36 процентов для тех, кто зарабатывает более 115 тысяч долларов США, и 39,6 процента для доходов свыше 250 долларов США. Это увеличило корпоративный подоходный налог с 34 процентов до 36 процентов для корпорации с доходом в размере более 10 миллионов долларов. Был поднят налог на газ на \$. 043 за галлон и ограничил возможность корпораций требовать налоговые вычеты. Во-вторых, он подписал Североамериканское соглашение о свободной торговле. Он отменил тарифы между США, Канадой и Мексикой. Это крупнейшее торговое соглашение в мире.

Несмотря на некоторые ошибки и просчеты, правление президента Уильяма Дж. Клинтона вошло в историю США как самый длинный период экономического роста в двадцатом веке. Наряду с активной политикой экономического регулирования, его антикризисная программа основывалась на реформах (налоговых, социальных и прочих) с перспективой на долгосрочный экономический рост новых секторов экономики, появившихся в предыдущем инновационном цикле, в том числе компьютеризации общества, развития интернета, биотехнологий, генной инженерии и нанотехнологий. Билл Клинтон описал суть своей политики как 6 «за»: за экономический рост, за защиту окружающей среды, за защиту гражданских прав, за борьбу с преступностью, за развитие бизнеса, за интересы труда.

Несмотря на то, что Билл Клинтон больше не является президентом, он активен в политике. Его жена, Хиллари Клинтон, также участвует в политической деятельности.

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СЕМЬ ФАКТОВ, КОТОРЫЕ ВЫ НЕ ЗНАЛИ О «БАБУШКЕ ЕВРОПЫ»

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Будущая королева Виктория родилась 24 мая 1819 года. Она была коронована в Вестминстерском аббатстве 20 июня 1837 года и правила вплоть до своей смерти 22 января 1901 года. Виктория вышла замуж 10 февраля 1840 года за принца Альберта Саксен-Кобург-Готского. У неё было девять детей, которые заключили браки с представителями правящих династий и знатных европейских семей, а сама Виктория, дорожившая этими династическими связями, получила прозвище «Бабушка Европы».

1. Первым королевским актом Виктории стало требование часа наедине.

Восемнадцатилетняя Виктория была воспитана по строгой «Кенсингтонской системе», которая обеспечивала ей защиту, изоляцию и контроль. Ее повсюду сопровождали гувернантки, и она спала в одной комнате с матерью до тех пор, пока не стала королевой.

2. Виктория познакомилась с принцем Альбертом в подростковом возрасте, и он сразу же понравился ей, хотя никаких романтических чувств она тогда к нему не испытывала.

Альберт и его брат Эрнест приехали в Кенсингтон весной 1836 года. Виктория писала в своем дневнике: что Альберт высок, красив и очень умен. Хотя Виктория и Альберт знали о планах помолвки, Альберт позже заявил, что между ними "не было ни слова, намекающего на будущее". Любовь расцвела только после его второго визита в 1839 году.

3. Виктория вела в моду белое свадебное платье.

Раньше женщины одевались на свадьбу в свои лучшие платья (обычно цветные). Виктория была в белом атласном платье с воланом из хонитонского кружева под старину. На голове у нее был венок из цветов апельсина, а на шее-бриллиантовое ожерелье и серьги. Альберт подарил ей на свадьбу сапфировую брошь. После этого белый цвет стал очень модным и так началась традиция белого свадебного платья, которая продолжается по сей день.

4. Виктория активно занималась политикой.

Виктория была страстно увлечена политикой и не стеснялась высказывать свою точку зрения. За это её часто критиковали, особенно когда это приводило к различным последствиям. Её симпатия к вигам привела к событиям мая 1839 года, вошедшим в историю как «Будуарный кризис». В 1839 году новое правительство возглавил тори сэр Роберт Пиль. Дело в том, что многие фрейлины королевы были женами вигов, и Пиль захотел заменить их на жен тори. Виктория категорически воспротивилась этому, и Пиль был вынужден уйти в отставку. Год спустя Пиль вновь вернулся в кресло премьера, однако на этот раз был осторожен и не допустил повторения "Будуарного кризиса".

Виктория писала о своих политических наклонностях в своих письмах. Например, в письме, адресованном ее дяде 18 июня 1844 года, подробно рассказывается о ее чувствах по поводу возможной отставки премьер-министра тори Роберта Пилля. Она была сильно огорчена и считала это большим бедствием для мира в стране и в Европе.

5. Виктория была одной из первых известных людей, которые испытали на себе хлороформ.

Врач королевы Виктории Джон Сноу дал ей новое лекарство под названием «хлороформ» для того, чтобы заглушить боль во время рождения ее младшего сына, Леопольда. Она заявила, что препарат «успокаивающий и восхитительный».

6. Уединенный траур Виктории после смерти Альберта вызвал критику общественности.

После смерти Альберта в 1861 году Виктория ушла из поля зрения общественности. С годами симпатии к Виктории ослабли, и к 1865 году она перестала выполнять свои королевские обязанности. Кто-то прикрепил к воротам Букингемского дворца табличку с надписью: «Эти помещения сдаются в аренду или продаются в связи с упадком бизнеса покойного.»

7. Несмешная шутка.

Знаменитая цитата «нам не смешно» обычно приписывается королеве Виктории как ее ответ на вульгарную шутку на званом обеде. Однако нет никаких конкретных доказательств того, что она когда-либо это говорила. Она часто изображалась как суровый монарх, но на самом деле она была очень веселой и часто смеялась над шутками, которые другие находили шокирующими и скандальными.

Королева Виктория скончалась после непродолжительной болезни 22 января 1901 года. В памяти своего народа она навсегда осталась монархом, период правления которого стал одной из ярчайших страниц истории Англии. Королева Виктория по праву принадлежит к числу тех немногих правительниц, кого не только любили и ценили современники, но и кому историки никогда не отказывали в уважении.

И. И. Яхиев
ФУТБОЛ В АНГЛИИ

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Футбол – это самый популярный вид спорта в Великобритании. В каждой стране Соединенного Королевства есть своя футбольная ассоциация, а также десятки собственных футбольных лиг. Согласно исследованию, проведенному ФИФА в 2006 году, в Англии зарегистрировано около 40 000 клубов, что, как минимум, на 11 000 больше, чем в любой другой стране. Второе место по числу клубов занимает Бразильская конфедерация футбола, в которой зарегистрировано 29 000 клубов.

Англия, наряду с Шотландией, является старейшей футбольной сборной по футболу в мире. Английский футбольный клуб Шеффилд является самым первым футбольным клубом в мире. Национальная футбольная сборная Англии является одной из восьми команд, которые сумели выиграть Чемпионат мира по футболу. Это произошло в 1966 году. Англия-одна из сильнейших сборных в мире, очень редко выпадающая из первой десятки рейтинга FIFA. Англия была самой успешной командой в розыгрышах Домашнего чемпионата Великобритании. Они выиграли этот турнир 54 раза. В Англии также существует ряд молодёжных сборных, начиная со сборной по футболу до 16 лет и заканчивая сборной до 21 года.

Главный футбольный стадион в Англии — это «Уэмбли». Он является самым вместительным стадионом страны (90 000 мест). На нём играет свои домашние матчи национальная сборная Англии, а также проводятся финалы и полуфиналы Кубка Англии, финал Кубка Английской лиги и ряд других соревнований. Крупнейшим клубным стадионом страны является «Олд Траффорд» (76 212 мест), домашняя арена футбольного клуба «Манчестер Юнайтед». Второе место по вместимости среди клубных стадионов занимает «Эмирейтс» (60 355 мест), домашняя арена футбольного клуба «Арсенал» и третье место — «Сент-Джеймс Парк» (52 387 мест), стадион футбольного клуба «Ньюкасл».

Главный турнир в Англии называется Кубок Англии (старейший в мире футбольный турнир). Сегодня высшая лига Англии, Премьер-лига, является одной из самых популярных и богатых спортивных лиг в мире, с шестью из десяти самых богатых футбольных клубов в мире.

Английская премьер-лига была основана 20 февраля 1992 года. Она считается самой зрелищной футбольной лигой в мире. В Премьер-лиге каждый год принимают участие 20 клубов. И по окончании сезона три клуба, которые заняли три последних места в Премьер-лиге, заменяются тремя лучшими командами из Чемпионшипа (второй по значимости дивизион в Англии). Чемпионат проходит с августа по май, каждая команда проводит 38 матчей. Английская Премьер-лига является самым популярным спортивным чемпионатом в мире. Также она является самой прибыльной футбольной лигой в мире. В Премьер-лиге за все время выступало 45 различных команд, но всего шесть из них выигрывали чемпионский титул. 13 раз «Манчестер Юнайтед», 5 раз «Челси», 3 раза «Арсенал», 3 раза «Манчестер Сити», 1 раз «Блэкберн Роверс» и 1 раз «Лестер Сити». Действующим чемпионом является «Манчестер Сити», выигравший свой третий чемпионский титул Премьер-лиги в сезоне 2017/18.

Футбол является популярным видом спорта, в который играют во всем мире. Это национальный вид спорта большинства европейских, латиноамериканских и многих других стран. В наши дни футбол пользуется всенародным признанием. Сейчас трудно представить себе жизнь любой страны без футбольных матчей. И всё это благодаря Англии, ведь именно там родился футбол.

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Friedrich Wilhelm Bessel

Friedrich Wilhelm Bessel war ein richtungsweisender deutscher Wissenschaftler, dessen Tätigkeit sich auf die Gebiete Astronomie, Mathematik, Geodäsie und Physik erstreckte.

Während der Ausbildung zum Kaufmann in Bremen erwuchs sein Interesse für die Astronomie. Mit einer selbstständig erarbeiteten Bahnbestimmung des Halleyschen Kometen gewann er 1804 die Aufmerksamkeit des Astronomen Wilhelm Olbers, der ihm daraufhin eine Stellung als Inspektor an der privaten Sternwarte Lilienthal von Johann Hieronymus Schroeter vermittelt. 1810 wurde Bessel als Professor für Astronomie an die Universität Königsberg berufen und mit der Leitung der dort geplanten Sternwarte betraut, an der er bis zu seinem Tode 1846 tätig blieb.

In einem jahrelangen Durchmusterungsprogramm sammelte er Positionsdaten von 75.000 Sternen.[1, с.1]

Johann Fabricius

Am 27. Februar 1611 nahm er erstmals dunkle Flecken auf der Sonne wahr. Da er sich zunächst unsicher war, ob es sich um atmosphärische Erscheinungen oder eine optische Täuschung handelte, wiederholte er seine Beobachtungen, wobei er seinen Vater hinzuzog. Da ihre Augen in Mitleidenschaft gezogen wurden, wandten sie später eine ungefährlichere Beobachtungsmethode an: Mittels einer Lochblende lenkten sie das Sonnenlicht in ein abgedunkeltes Zimmer und betrachteten die Sonnenscheibe auf einem weißen Stück Papier (das Prinzip der Camera Obscura). Die Existenz der Flecken konnte zweifelsfrei nachgewiesen werden. Deren tägliche Bewegung auf der Sonnenscheibe wurde zutreffend auf eine Eigenrotation der Sonne zurückgeführt/ Fabricius war jedoch der Erste, der die Entdeckung in einer wissenschaftlichen Abhandlung beschrieb.[3, c.1]

Johannes Kepler

Johannes Kepler war ein deutscher Astronom und Mathematiker. Es gilt als der Begründer der modernen Astronomie. Bekannt ist er vor allem dadurch, dass er die Gesetze der Planetenbewegung entdeckte, die nach ihm Keplersche Gesetze genannt werden. So gilt Johannes Kepler heute hauptsächlich als einer der Begründer der modernen Naturwissenschaften, doch sein Leben war auch geprägt von einer sehr tiefen Glaubensüberzeugung.

Sein Erstlingswerk mit dem Titel "Mysterium cosmographicum" (Weltgeheimnis) erschien im Jahre 1596. Es enthielt das Grundprinzip des Weltbildes von **Nikolaus Kopernikus**, der schon die Bewegung der Erdkugel nachgewiesen hatte. Ferner legte er dar, dass die Sonne den Mittelpunkt bildet und die Planeten, einschließlich der Erde in Kreisbahnen mit zusätzlichen Hilfskreisen die Sonne umrunden.

Johannes Kepler stellte die drei Planetengesetze auf. Diese "Keplerschen Gesetze" beinhalten folgende Aussagen:

- Die Bahnen der Planeten sind Ellipsen, in deren Mittelpunkt die Sonne steht.
- Die Verbindungslinie von der Sonne zum Planeten überstreicht in gleich Zeitabständen gleich große Flächen der Ellipse.
- Die dritten Potenzen der großen Halbachsen der Planetenbahnen verhalten sich wie die Quadrate der Umlaufzeiten.

Damit hatte Kepler als erster eine Erklärung der Bewegung der Planeten gegeben, die deren Ursache in der Kraft der Sonne erkennt.[2,c.2]

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СЕКЦИЯ «НАУЧНО-ТЕХНИЧЕСКИЙ ПРОГРЕСС: ТЕНДЕНЦИИ И ПЕРСПЕКТИВЫ»

В.А. Егорова, И.В. Чуприн

ИСТОРИЯ РАЗВИТИЯ РАДИОТЕХНИКИ

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Радиотехника является мощным средством технического прогресса. Данная наука является одной из ключевых в современном мире. Она также имеет массу ответвлений, представляющих из себя уже другие науки, которые базируются на основах и законах радиотехники. Сейчас люди и представить не могут, как жить без радиоэлектроники. История коммуникации как часть человеческой жизни зародилась вместе с понятием общества, а, как известно, без общества не существует и человечества. Общение - одно из важнейших потребностей человека. В современном мире большую роль в общении человека играют технологии и различные средства связи, такие как телефоны и компьютеры. Но какие же плюсы такие технологии приносят человечеству?

В первую очередь, средства связи, почти всегда доступные и сравнительно простые в использовании, значительно облегчают наше общение. Обмен информацией может происходить буквально в считанные секунды, что чрезвычайно удобно и экономно. Передавать информацию возможно из одной точки земли в другую. Помимо обычной связи, существует такой способ обмена информацией как видеозвонок. Не каждый может позволить себе побывать в других странах. Поэтому мы можем общаться с людьми находящимися за границей и обмениваться любой информацией. Это является одним из лучших способов освоения языка, например английского.

Важность данной темы определяется необходимостью изучения истории развития радиотехники, так как эта наука является основополагающей для многих вещей, с которыми мы сталкиваемся повседневно. Начало радиоэлектроники было положено с изобретением радио. Именно это развитие позволило нам создавать электронику, такую как мобильные телефоны, телевизоры, планшеты. А ведь начиналось все с обычного радиоприемника, в процессе создания которого участвовали многие великие ученые, большинство из которых были выходцами из Англии и Америки: Майкл Фарадей, Джеймс Максвелл, Гульельмо Маркони, Джозеф Лодж, Дэвид Хьюз, Александр Попов, Уильям Крукс, Малон Лумис, Томас Эдисон, Генрих Герц, Ли де Форест и другие.

Английский язык играет важную роль в радиотехнике. Для радиосвязи был придуман специальный алфавит, под названием фонетический. Его используют при передаче сложных для восприятия на слух слов,

позывных, адресов электронной почты и так далее с целью уменьшения количества ошибок. Если в процессе ведения радиообмена произношение имен собственных, служебных сокращений и отдельных слов может вызвать сомнение, то они передаются по буквам. При такой передаче каждая буква текста произносится, как указано в соответствующей таблице. Для международных связей используется вариант в английской интерпретации. Стоит отметить, что в международной организации гражданской авиации также применяется фонетический алфавит. Еще его называют фонетическим алфавитом НАТО. Однако не стоит путать его с предыдущим, потому что большинству символов в нем присущи уже другие слова.

Английский фонетический алфавит является удобным для запоминания, так как каждое слово, которое принадлежит определенной букве, начинается на эту же букву. Например: E – Easy, F – Fox, I – Item, K – King, R – Roger, W – William, X – X-Ray и другие [5]. Фонетический алфавит был придуман в 1888. Исходя из этого, можно сделать вывод, что радиопередача была изобретена примерно в это же время. Ведь точной даты ее создания нет. Так, когда же была придумана радиопередача? История началась во второй четверти 19 века...

Все началось с того, что Майкл Фарадей, английский физик, теоретически предсказал существование электромагнитного излучения. Он обнаружил вращение магнита вокруг проводника с током и вращение проводника с током вокруг магнита. Далее Джеймс Максвелл, британский физик, опубликовал трактат по электричеству, который стал основой электротехники. Из уравнений электродинамики, которые составил Максвелл, следовал вывод о том, что возможны распространения электромагнитных волн в свободном пространстве со скоростью света. На пути к своим открытиям Максвелл придерживался правила, которое впоследствии стало знаменитой цитатой в мире науки: «Из всех гипотез...выбирайте ту, которая не пресекает дальнейшего мышления об исследуемых вещах».

Благодаря трудам британского ученого, Герц создал устройство под названием «Вибратор» и произвел с ним небольшой опыт. Изобретатель обнаружил следующую закономерность: если в генераторе будут происходить высокочастотные колебания, то в промежутке резонатора, находящегося далеко от генератора, тоже будут проскакивать маленькие искры. Именно его опыт предопределил появление радио [2].

В России считают, что первый радиосигнал был получен русским физиком Александром Степановичем Поповым. Он впервые представил свое изобретение 7 мая 1895 года.

Гениальность русского физика заключалась в том, что он на основе простой базы смог создать совершенно новое техническое устройство. На основе прибора Герца, Попов смог построить аппарат, с помощью которого можно получить беспроводной радиосигнал. В это время Попов служил в Морском ведомстве, и поэтому его прибором пользовались только во флоте.

С помощью этого радиоприемника офицеры имели возможность поддерживать связь на расстоянии нескольких километров. Русский инженер не запатентовал свое изобретение. Но, несмотря на это, в России именно он считается изобретателем радиоприемника.

Год спустя, физик, Гульельмо Маркони, продемонстрировал свой радиопередатчик. К тому же, с помощью аппарата Маркони была установлена радиосвязь через Атлантический океан с Америкой. Многие считают именно его первым основателем радио, так как Попов не опубликовал свою работу официально [1].

В начале 20 века радиотехника уже широко распространилась по Европе. На военных кораблях начали устанавливать радиопередатчики. Ли де Форест, американский физик, создал ламповый триод. Это первый в истории элемент, который усиливает радиосигнал. Благодаря ламповым триодам начали создаваться очень мощные передатчики, которые передавали четкие сигналы. Такие приборы делали это быстрее, чем приборы Попова и Маркони. Стоит отметить, что именно американский физик Ли де Форест придумал слово «радио» [2].

К середине 20 века был создан транзистор. Над его изобретением трудились три американских физика: Уильям Шокли, Джон Бардин, Уолтер Браттейн. Их прибор усиливал и изменял электрические сигналы [3].

Во время Первой Мировой Войны были установлены первые радиорупоры. Через них передавались тексты статей из газеты и последние новости.

Во Второй Мировой Войне радиосвязь стали активно применять в военных целях. Например, для передачи информации между штабами или во время боя. Со временем она стала неотъемлемой частью летчиков и танкистов [4].

После Второй Мировой Войны радио активно развивалось в различных направлениях. Оно постепенно стало превращаться в один из главных инструментов для передачи новостей и продвижения музыки в мире.

С каждым годом стали придумывать различные функции для радио. Так к концу 20 века провели первую онлайн трансляцию концерта. Пользователи могли слушать концерт уже дома.

Популярность онлайн радио растет с каждым годом. Сейчас любой пользователь интернета может создать собственную радиостанцию. Вскоре стали производить новые технологии в сфере радиотехники. Одним из них является интернет-радиоприемник. Он дает возможность прослушивать радиостанции через интернет.

Современная радиоэлектроника - важный инструмент технической коммуникации и связи. Жизнь современных людей невозможно представить без обмена огромным объемом информации, который осуществляется с помощью современной радиоэлектронной аппаратуры в разных концах Земли и в космосе. С помощью радиоэлектроники управляют автоматическими цехами и электростанциями, видят в тумане и

непроглядной тьме, решают сложные математические уравнения, изучают звезды, лечат различные заболевания.

В наше время существует множество возможностей для создания чего-то нового. Каждый день разрабатываются новые изобретения и все больше современных технологий внедряются в нашу повседневную жизнь. Человек, в свою очередь, должен интересоваться этими достижениями. Он должен идти в ногу со временем, быть любознательным, и, в совокупности с этим знать историю, для того чтобы анализировать, проводить параллели между прошлым и настоящим с целью предсказания будущего и адекватного оценивания качества жизни в сравнении с прошлыми десятилетиями и веками.

Радиотехника – одна из ключевых, основополагающих наук, на плечах которой лежит подавляющее большинство современных изобретений. Менее чем за полтора века, радиотехника кардинально изменила жизнь человека. Ее итоги развития поистине грандиозны: радиосвязь, телевидение, радиовещание, радионавигация, обеспечивающая плавание кораблей в любой точке Мирового океана – все эти достижения современной радиотехники стали всеобщим достоянием людей. Именно эта наука является основой, благодаря которой имеют место быть изобретения, ожидающие нас в будущем.

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COMPUTERS ARE CLOSER TO HUMAN THAN WE THINK
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Turing envisaged that machine intelligence could take off once it reached a 'critical mass'. This phrase is expounded in a science-fiction novel, *The Turing Option*, by the AI pioneer Marvin Minsky.

In 2008, Ray Kurzweil received much media attention for speaking at an American Association for the Advancement of Science meeting and saying that human-level AI would be achieved by 2030.

The logical consequence of this thesis is that machines would not merely match but would surpass human abilities. Transhumanists take this as a completely serious starting-point. Thus the Singularity Institute for Artificial Intelligence states that 'In the coming decades, humanity will likely create a powerful artificial intelligence. The Singularity Institute... exists to confront this urgent challenge, both the opportunity and the risk.' This is apparently taken seriously by the British government now.

The article *How long before superintelligence* by Nick Bostrom gives essentially the same argument as that of Turing's 1950 paper, though without worrying so much about the objections. So does *When will computer hardware match the human brain?* by Hans Moravec. Turing estimated 10¹⁰ bits of storage to be sufficient, but of course this now seems ridiculously low for computer storage. Modern writers now give other figures and use Moore's Law to estimate future power. In one way Turing's predictions certainly fell short of what has happened in 50 years, because miniaturization has gone far beyond what he imagined possible. He was right, though, in citing the finite speed of light as an essential factor determining constraints on technology.

Turing's paper outlined both explicit programming ('top-down' in modern terms) and learning processes ('bottom-up') as approaches to creating AI. This AI research group make a lot of Turing's picture of imitating human learning and have a "child-machine" called HAL.

Until about 1990, top-down and bottom-up AI research groups were hardly on speaking terms. Since then there has been some confluence and synthesis of strategy, reflecting much better what Turing recommended in 1950, that 'both approaches should be tried'.

Mind, computability and physics

The restriction to textual communication is now less significant, as computer files are used for all the media and sensory inputs of 'virtual reality'. A suggestion for an Ultimate Turing Test exploits this fact. What this shows is that the mathematics of computability is the real bedrock on which the whole question rests. Anything a computer can do is computable; anything computable can be done on a computer (as a universal machine); if what the brain does is computable it can be imitated by a computer. That is the fundamental argument.

Turing himself argued in this paper that the question of uncomputability in mathematics was not in fact relevant to the question of mental faculties. In 1961 the Oxford philosopher J. R. Lucas published a paper on the significance of Gödel's theorem which argued to the contrary. Gödel himself also criticized Turing's assertions about human minds in the 1960s. Turing's view was defended by his wartime colleague, the mathematician and statistician I. J. Good. It was later much elaborated by Douglas Hofstadter in his 1979 book *Gödel, Escher, Bach*.

In 1989, Roger Penrose published *The Emperor's New Mind* which took a completely fresh approach, connecting uncomputability with unknown laws governing quantum physics. His work *Shadows of the Mind* followed in 1994, making a specific suggestion about the physics of the brain. A good entry point into this argument is the on-line paper *Beyond the Doubting of a Shadow*, Penrose's response to criticisms of *Shadows of the Mind*.

The Chinese Room

Other philosophers completely disagree with the entire program for Artificial Intelligence, developing the argument that Jefferson (and Wittgenstein) began. The 'Chinese Room' story of John Searle gives the most famous argument against the validity of Turing's test.

Nowadays the thesis that no physical process can go beyond the bounds of computability, is known as the Physical Church-Turing thesis. In discussing the 'Argument from Continuity of the Nervous System', Turing's 1950 paper comes very close to asserting this thesis. But this is one area where Turing's post-1950 texts are well worth studying, because in the 1951 radio talk, Turing briefly gave a different discussion, this time bringing in the difficulty posed by quantum mechanics. This radio talk also expressed more concern about the significance of uncomputability. In 1980 John Searle published a paper, "Minds, Brains, and Programs", in *Behavioral and Brain Sciences* and introduced a famous thought experiment: The Chinese Room. With this thought experiment, Searle sparked a thousand debates and discussions about artificial intelligence, consciousness, semantics, functionalism, computation, and so on.

As he explains it, the Chinese Room thought experiment goes is as follows:

Imagine a native English speaker who knows no Chinese locked in a room full of boxes of Chinese symbols (a data base) together with a book of instructions for manipulating the symbols (the program). Imagine that people outside send to the room other Chinese symbols which, unknown to the person in the room.

And imagine that by following the instructions in the program the man in the room is able to pass out Chinese symbols which are correct answers to the questions (the output). The program enables the person in the room to pass the Turing Test for understanding Chinese but he does not understand a word on Chinese.

The thought experiment is initially quite compelling. Searle has always argued that this thought experiment is a decisive blow against the possibility of computers ever "understanding" the world in the way humans and other biological, "wet" creatures do. He thinks there is something special about the biology of the

brain that “gives rise” to the meaning, understanding, consciousness, mental content, etc.

Let’s imagine, you have a depression and went to the internet for good news, funny videos, etc. After some time, you are definitely to find a person for chat. Conversations what you began grew into something bigger what is called a friendship. You are talking with a “friend” every day and every night, this became some kind of addiction so you can’t live without chatting. Time passed and of course you want to meet your best friend because it’s time for it! Then you notice a strange thing, a pen friend has no avatar on his page, no information about his lifestyle, where he lives, what likes to do in his free time, but that’s just a strange coincidence you suggest. So one day you send message to him “Let’s meet in the park not far from my house”, he answers “I can’t, “Why”, you say, “because I’m an Artificial intelligence”. Can’t image? What if I say to you this is pretty possible if you wait a little bit time, when deep learning chat bot Xiaoice made by Microsoft learns that much you can’t identify it as a robot, or a computer? Are you scared already? So I’ll leave you with your thoughts alone and continue to watch on progress the learning AI being human.

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THE PERSPECTIVES OF FUSION POWER

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Large amount of energy will be required in developing countries, where rapid urbanization leads to great increase in demand for energy. With environmental requirements for zero or low CO₂ emission sources, new energy sources must be developed. If fusion will be available as a energy option by the middle of this century, it should be able to acquire a significant role in providing a sustainable and safe solution to tackle worlds's energy needs.

The vision of a power-producing fusion reactor based on controlled thermonuclear reactions emerged more than a quarter of a century ago, and the remarkable progress that has taken place in recent years has bolstered this vision immeasurably. Although it has been somewhat elusive, the first major milestone towards the achievement of economic fusion power is expected to occur within the next few years when a demonstration of scientific feasibility or break-even is expected to happen.

Fusion is the process which powers the Sun and the stars. It is called 'fusion' because the energy is produced by fusing together light atoms, such as hydrogen, to form helium, at the extremely high pressures and temperatures which exist at the middle of the sun. At the such high temperature any gas becomes plasma, which is the fourth state of matter (other three is the solid, liquid and gas).

In order to replicate this process on earth, gases need to be heated to extremely high temperatures of about 150 million degrees C whereby atoms become completely ionised. The fusion reaction that is easiest to accomplish is the reaction between two hydrogen isotopes: deuterium, extracted from water and tritium, produced during the fusion reaction through contact with lithium. When deuterium and tritium nuclei fuse, they form a helium nucleus, a neutron and a lot of energy.

Unlike most of the other energy sources, the fuel available to fusion reactors is almost limitless. Although it exists in the ocean's waters to the extent of about one part in 7000, there is enough deuterium in these waters such that if burned by this process it will provide enough energy to meet mankind's needs for thousands of years and longer.

Scientists have built devices able to produce temperatures more than ten times higher than those in the sun. To reach these temperatures there must first be powerful heating, and thermal losses must be minimised by keeping the hot fuel particles away from the walls of the container. This is achieved by creating a magnetic "cage" made by strong magnetic fields which prevent the particles from escaping. For energy production this plasma has to be confined for a sufficiently long period for fusion to occur.

First breakthrough device was soviet tokamak, which was able to "ignite" and keep fusion reaction at short time. Following soviet tokamak, fusion research became significant in the 1970s. But the cost and complexity of the technologies involved increase to the point, where single country cannot handle the cost. That's why international cooperation is the only way for further researches in this area.

Tokamak is a Russian word for a torus shaped magnetic chamber. Nowadays scientists have succeeded in producing gas with temperatures ten times higher than in the first fusion reactors. The first megawatt of power was produced in 1991 on JET - Joint European Torus – the world's largest fusion device, which currently holds the world record for fusion power. Producing 16 MW of fusion energy while consuming 24 MW to heat the fuel is currently the record for greatest fusion power produced.

Fusion energy has the potential to provide a sustainable solution to European and global energy needs. ITER, which means the way in Latin, is an international collaboration on an experimental facility. The goal of ITER is 500MW of power output, where less than 50MW of heating plasma input. This experimental reactor will not generate electricity. ITER is the world's greatest energy project which aims to demonstrate that fusion can be part of the solution by improving our energy mix to meet the global energy needs.

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IMPACT OF THE SCIENTIFIC AND TECHNICAL PROGRESS (STP) ON PERSONAL DEVELOPMENT AND MENTAL HUMAN HEALTH

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It is important to note that scientific and technical progress is growing by leaps and bounds all over the world and its influence on everything that happens in our world is very great. Every day we enjoy the benefits of this progress, and we

can't imagine how to live a day without using them. That is, on the basis of this proposal it is possible to come to the conclusion that the use of scientific and technical progress inventions makes an impression on the personality of each of us every day and affects us throughout our lives. Therefore, this question seemed very interesting. Besides, there are very few works devoted to this issue. Great attention should be paid to the issue of the influence of the achievements of STP on the development of the personality of each of us.

The influence of science and technology on our life begins in childhood. Indeed, after birth, a very active development of the human brain begins. This process has been and remains almost the same as it has always been, but at the present stage, starting from 3-5 years, the brain begins to develop faster than before. Naturally, one of the main factors of such active and rapid brain development is the achievement of technical progress. If before the brain did not require any special efforts to learn the elementary things around us, now most children at the age of 3-5 are already trying to master the computer, learn the elementary skills in using a mobile phone, etc. Of course, all these technical innovations directly contribute to the more rapid development of the human brain. And, it would seem that all this should bring only benefit for the development of our children intellectually, but, as always, this so-called "BUT" exists.

First, computers, tablets, cell phones, laptops, etc. are not only means that help a person to develop intellectually, but they are also means of forming an idea of the world. For example, watching an action movie or a horror movie on TV can only do harm to the child's weak and unstable psyche. Modern computer video games have the same effect on children and adolescents. It should take into account the opinion of scientists that the first six years of life is the most important period in human development, and at this time foundations of the whole future life, self-confidence, the knowledge that you want and love, self-esteem, behavior in stressful situations are being laid. Based on this, it is necessary to draw immediate conclusions. Namely, the influence of modern scientific and technological progress on the formation of a person's personality begins in early childhood, and already at this age they can have a detrimental effect on the human psyche. But the greatest danger for children and adolescents is gaming addiction.

Indeed, in the virtual world a child does not need to be responsible for his actions; there he simply lives according to the written scripts of programmers and designers. As a result, the development of the child's personality occurs in a virtual scenario abstracted from reality. Therefore, children consequently returning into the world of reality become very cruel, overemotional, uncontrollable, and they may also have a feeling of being unwell. If you do not help them in time in this state, in the future these children may lose a number of important personal qualities such as: determination, restraint, endurance, responsibility, resistance to stress, etc. It is worth noting that a lot of different research is devoted to this topic. Therefore, in this paper we will not pay much attention to it.

The second and the most acute problem of the influence of STP on a person was the "cult of worship of annual technical innovations". It is not difficult to

notice how over the past few years people literally began to worship some types of modern gadgets. Of course, everything can be attributed to the consumer boom, but still going beyond this and consider everything from the consumption theory standpoint, it becomes clear that this process does not fully correspond to this theory. According to the theory, demand increases only when there are significant changes in consumer properties of the product, which, of course, does not occur annually. That is, the massive dependence of people on the annual technical innovations is evident. Modern scientists call in “gadget addiction”. Table 1 shows the results of gadget addiction indicators for some European countries.

Table 1

Average data on the gadget addiction for European countries

Country	Indicator gadget addiction
Great Britain	1/3 inhabitants buy devices without a certain need
Poland	19% of Poles reported that they feel anger if cannot use this or that technical novelty
Italy	In this country, home to only 4% of gadget-dependent citizens, who make unreasonable purchases of cell phones and other equipment
Russia	Among Russians the greatest losses are among young people. 85% of residents aged from 18 to 35 use mobile phones for. Half of them are also psychologically dependent on players.

It would seem that gadget addiction can influence the development of personal identity. But due to this type of addiction a person has a violation of the objectivity of decision-making, which in the future may also affect the development of personal and professional qualities of a person.

The third, most dangerous, consequence of the development of STP for the normal development of a person’s personality is the Internet addiction. The Internet addiction is a mental disorder. A person has extreme obsessive-compulsive disorder and wishes to enter the global network and is unable to leave it on time. This disorder was first described by Dr. Goldberg in 1995. Although Goldberg did not intend to include this disorder in officially accepted psychiatric standards, the description he proposed is based on the description of disorders that are associated with excessive use of psychoactive substances. The psychiatrist identified several main symptoms of this addiction: the use of the Internet leads to a loss of psychological, interpersonal, social or physical status; Internet causes distress or a stressful negative painful condition. Also, the consequences of this disorder can also be attributed to the degradation of a person’s identity, decrease in motor activity. Instead of distracting from the Internet and looking out the window to find

out whether it is raining outside or not, in most cases a person would prefer to use the Internet for this purpose. At the moment, Internet addiction is widely discussed, but it is not officially recognized as a global disease.

Also in this paper we would like to focus on a very frightening trend that shows the relationship between the development of scientific and technical progress and statistics of suicide growth in the world. “Need and unemployment”, “futility and hopelessness of the struggle for existence” – these words became clichés and have long been associated with the causes of approximately 30 percent of suicides. In general, the economic life of society is strongly reflected in the suicide curve: recessions in the world economy in 1908, 1923, 1929-1933, 1937 clearly transformed into peaks on this curve, and during the “great depression” in the United States the suicide rate increased 2 times. It is necessary to cite the data of this sad statistics for Russia and Belarus: if in the XIX century in Russia the suicide rate (per 100 thousand inhabitants) was 1.7 in 1803; 2.6 in 1829; 2.9 in 1838. Now Russia ranks second in the world in the number of suicides - 37.4 for every 100 thousand people. Compared to Russia in Belarus this statistics seems slightly less frightening – 28.3 suicides per 100 thousand population, given that only 9 million people live in Belarus. According to one version of the scientists, the growth of suicides is also related to the fact that because of the STP attention-deficit disorder begins to develop. It is due to the fact that even in childhood some parents don't pay attention to their children. Instead of communicating with them they let them watch TV, play computer games or do something else without thinking that they endanger children's future life. Based on the above mentioned problems it is necessary to note once again that, of course, it is impossible to fully draw parallels between the STP and the growth of psychological deviations and the increase in people's suicide, but still it is worth noting that this trend is present.

Of course, scientific and technical progress cannot be reason for all the above problems. Besides, it is worth taking into consideration that in many cases the STP is a catalyst for the development of these problems.

In conclusion, it is necessary to add that the proper solution to these problems lies mainly in the person himself. After all, to solve all these problems a person may not even need to seek professional help. For example, if you want your children to grow up mentally healthy and integrated personality, a good upbringing will be sufficient enough in modern technical conditions. Therefore, in the context of preventing children's computer addiction, one should pay attention to the fact that raising a child should be reduced mostly to the fact that a computer is only a part of life, and not the main gift for good behavior. The only current proven method to prevent a child from being dependent on a computer is to involve him in processes not related to computer activity, so that electronic games and processes do not become a substitute for reality. To show a growing person that there is a variety of interesting entertainment besides a computer, which not only allows one to experience the thrill, but also trains the body and normalizes the psychological state [3, p. 94]. As for the adults' gadget addiction, you just need to find the strength and put serious limitations.

In general, the most important advice that can be given to get rid of all modern problems associated with STP is actually very simple: communicate with people in the real world more often.

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THE USE OF SCIENTIFIC KNOWLEDGE IN EVERYDAY LIFE

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No doubt, we all live in the power of any laws, for example, biological, physical, political, social ones, etc. It is difficult to imagine our life without these laws because people, by nature, always obey something or someone. Science is an integral part of our life. Thanks to it we create new things. It is important to note that people lived last centuries could hardly imagine that we could communicate not only with letters, be able to see each other over long distances, receive a huge amount of different types of energy, etc.

The purpose of this article is to provide the reader with information on the application of the laws of science in our daily life and to show what most unexpected things they hide in.

Let us first consider the examples that we encounter in our everyday life. Each of us faces static electricity. For example, you, probably, noticed that after prolonged combing your hair begins to “stick out” in different directions. Or, during taking your clothes off in the dark, there are small numerous discharges. If we consider this effect from the physical side, this phenomenon is characterized by the loss of internal balance by the subject which is caused by the loss (or gaining) of one of the electrons.

Basically, it is a spontaneously generated electric charge resulting from the friction of the surfaces against each other. The reason for this is the contact of two

different substances of the dielectric itself. Atoms of one substance tear off electrons of another. After their separation each of the bodies retains its discharge, but at the same time the potential difference increases. Electricity can be your good helper. But for this you should know its features and skillfully use them in the right way.

The technology uses various methods that are based on the following features. When small solid or liquid particles of substances get under the influence of an electric field, they attract ions and electrons. Accumulation of charge occurs. Their movement continues under the influence of an electric field. Depending on equipment, it is possible to exercise different control over the movement of these particles with the help of this field. It all depends on the process. This technology has often become used in the national economy. Paintable parts that move in the container, for example, machine parts, are charged positively, and paint particles – negatively. This contributes to their rapid movement to parts.

As a result of this technological process, a very thin, even and rather dense layer of paint is formed on the surface of the object. Particles that have been accelerated by an electric field hit the surface of the product with great effort. Due to this, a high saturation of the paint layer is achieved. In this case, the consumption of the paint itself is significantly reduced. It remains only on the product itself. Due to the negative or positive charge of small particles, they are connected. The particles are distributed very even. For example, in the production of bread it does not need to perform time-consuming mechanical processes to knead the dough. Grains of flour which are pre-charged with a positive charge are fed into a specially designed chamber by air. There they interact with water droplets that are negatively charged and already contain yeast. They are attracted. The result is homogeneous dough.

Now we turn our attention to the continuity equation. Open the tap so that the water flows in a wide stream, and then close it slightly in the opposite direction. Note that the water jet at the top is wider than at the bottom. Have you ever thought why this happens? Water is almost incompressible (its density is constant), so the same volume of water that flows out of the tap in a second must flow in a second into the drain. When falling, water accelerates movement under the force of gravity, so that the lower part of the stream has a higher speed than the upper. In order for the amount of water at both points to be the same, the lower part of the jet must be considerably thinner than the upper part; otherwise more water will flow into the drain than it left the tap. In science, this phenomenon is called the continuity equation. It means that the amount of water flowing at a given point over a period of time is always constant.

Based on the same principle, if a gas or liquid begins to flow in a narrower channel, their velocity should increase. If you gently press on the handle of the syringe, the liquid fountains out of his fine needle. If you fit a hose with water to the syringe, you can get a constant and long-range jet of fluid. This is how washing machines work. Syringes and washing machines do not create water from the air:

at the input of the thick end of the hose it arrives as much as at the output from the thin end.

Another interesting point is the comparison of temperature and energy. Instinctively, we believe that hot objects contain a lot of heat, but this is not always true. There is a fundamental difference between the temperature of the object and the thermal energy contained in it. That is why a cold iceberg can contain a lot of heat. When a kilogram of heated iron cools by 10°C , it gives up nine times less thermal energy than when a liter of water cools down by 10°C .

You can burn your lips on the filling of hot apple pie, but you will not burn yourself on the crust of fried pasta, although both of these delicacies are of the same temperature. The fact is that a dry crust contains relatively little moisture, so it contains less thermal energy than a liquid apple filling, which mainly consists of water. When your tongue touches the pasta crust, it quickly gives off heat to the mouth, but does not burn it and cools quickly. When the same thing happens with apple pie, its watery filling gives a lot of heat energy and can burn lips.

The skin changes after long staying in warm water. Bring your fingers to your eyes and you will see that deep wrinkles have creased them. This is usually explained by the fact that the skin becomes wrinkled because it absorbs water and swells. But recent studies show that this is not the case. Our skin shrinks in the water, because the blood vessels passing through it are narrowed. Why it happens? Tom Smulders, a scientist at the University of Newcastle, believes that the skin wrinkles so that a person can better grab wet objects.

Water molecules that consist of two hydrogen atoms and one oxygen atom have a small positive charge on the side of the hydrogen atoms and a negative one on the side of the oxygen atom. Like a magnet, a water molecule has two "poles", so it is often called polar. And, like a magnet, a water molecule "sticks" to microscopic dirt particles and removes them. That is why water is such an excellent cleaner - "universal solvent."

How do bleaches work? Sunlight contains ordinary visible light and invisible ultraviolet. When your white T-shirt is in the sun, it reflects visible light, but absorbs ultraviolet light. After the T-shirt is washed using a detergent containing a color enhancer (bleach), microparticles of phosphorus-containing chemicals will fall on the fabric fibers (as on the inner surface of neon lamps). These particles capture ultraviolet light and transform it into visible light (by changing the wavelength of the reflected light and its shift to the visible region of the spectrum). So a shirt washed with bleach will reflect more light and appear brighter.

Such discoveries can be made without being in a super laboratory. In medicine there are examples of this: everyone knows that if the temperature rises and a person falls ill, the body needs to drink more water in order to sweat and lower the temperature. We learn this chain as babies from our mothers and we remember all our life. This is the most important mechanism of thermoregulation of the human body, knowledge of which helps us to cure disease. These examples prove that each person can be a scientist while not having a scientific degree.

Understanding how everyday things happen at home, you can imagine that your home is a personal laboratory in which you can conduct safe experiments.

How to charge your phone if you are far from a power outlet? Now the power bank is popular. And what if it is not there and you do not want to spend the extra money to buy it. Then build a system that will help you charge your smartphone personally from you. How is this possible? Again, everything is very simple. Energy for charging can be obtained from your heat, your movements. A generator is attached to the joint, which produces electrical energy when walking. This may be an electrodynamic generator, in which the magnet moves relative to the conductor or a piezoelectric, in which tension arises due to the deformation of the crystal. In each step 2 phases can be distinguished: when the muscles disperse the lower leg and when it is inhibited. The device works just in every other part of the step, thereby not providing any resistance when walking. Of course, such devices are not quite compact, but in the future it is possible to make them smaller and more compact.

But besides walking, we make other movements, for example, hands, body, etc. And because of this, clothes can often become electrified, so why not use this electricity to charge our gadgets? This is called the triboelectric effect: in during the friction of two different specific substances, electrons can cross from one to another. As a result, one body is charged positively, and the other is negative. The voltage can reach tens of thousands of volts. By 2018, scientists have learned how to create triboelectric generators. Such generators can be sewn into clothing, especially in the form of threads. Just imagine that your clothes are a charger! So far, the power of prototypes is small - tens of milliwatts, but this is enough to support the work of smart watches.

Electricity can also be obtained from body heat. At rest, a person produces about 80 watts of thermal energy (like a light bulb). If to collect it, it will be enough to charge the laptop for 30 minutes. For this you can use the Seebeck Effect (the occurrence of voltage in conductive substances from the temperature difference). An element is needed in which this effect is possible. If on one side we put something cold, and on the other something warmer (the most important is to have a temperature difference), an electric current appears. So you can get electrical energy from anything: a candle flame, a sleeping cat. Now there are watches on sale that do not need to be charged and at the same time they work because of the temperature difference, so that the watches store energy.

We considered what knowledge we can apply to our daily life from making hydrogen bombs to electrifying hair. I do not stop writing about the fact that all this is fascinating, you become a “mini” scientist capable of applying what you learned in real life. So energy for charging the phone can be obtained using our heat, our movement, etc. Instead of wasting time in social networks, looking through private photos of stars, create your private life of a famous scientist who will be useful and help people in real life. It is not necessary to become supermind, it is enough to understand and love your work. I urge you to learn all the

amazing things that you can see and apply and your daily life will become much more interesting.

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ARTIFICIAL INTELLIGENCE

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Artificial intelligence has firmly entered modern life in many areas of human activity. No doubt, many features of the use of Artificial Intelligence (AI) depend on the specific projects, developments and tasks that smart devices face. Already in all the factories of the world artificial intelligence takes its place. AI helps automated machines best to do their job. Matrix production which is still at the concept stage will use AI on an ongoing basis.

In medicine, the excellent memory of artificial intelligence and its ability to process a large amount of data, compare and analyze information is of great importance. This is how IBM Watson or, for example, DeepMind Health work. These smart assistants and similar ones do not just give advice to doctors, but also determine the tendency to disease or reveal them at very early stages when they can hide from the human eye. Artificial intelligence helps not only doctors, but also patients.

In recent years, telemedicine and related applications have become increasingly popular. They use different algorithms: some collect data from wearable sensors like fitness bracelets; others are questionnaires, the purpose of which is to establish the exact symptoms and problems of patients. Some AIs recognize speech and can be answered verbally, others prefer written communication. After receiving the necessary information, the applications either give recommendations what to do next and how to treat it, or send the appropriate information to the attending physician. Some of the most famous intellectual assistants of this kind are Ada and Your.MD.

A typical example of the use of AI in everyday life will be the system of smart homes, which are becoming more common. The task of most of these developments is to automate and facilitate our life as much as possible. For example, in the morning the AI will be able to push the curtains so that sunlight penetrates into the bedroom, wake you up with the help of a radio and turn on the

coffee maker, so that you can expect aromatic coffee for breakfast, and when you go to work, it activates an alarm. In the future, the functionality of such systems will probably be significantly expanded to the extent that the refrigerator itself will order your favorite food, and the wardrobes will steam the clothes. Smart home optimizes energy consumption, heating and ventilation, controls the work of various devices adapting to your schedule. Together, this not only makes life more convenient, but also helps to save energy.

Unmanned vehicles have ceased to be something unusual. Even in Russia drones have already begun to be introduced: for five years now the development of an unmanned vehicle has been underway in Russia, as it is officially called. The last two years have been especially active in developing: several companies have developed active samples at once. But still it is too far to full automation.

To control the level of automation the team of automotive engineers has created a standard of remotely piloted vehicles which includes six types of autonomy.

- Zero level: a lack of automation; all actions are performed by the driver.
- The first level: the car helps to drive in some way (cruise control, parking).
- The second level: partial automation, the car itself goes on some routes, but the driver maintains control.
- The third level: conditional automation, the car makes decisions on the road, changes the route, responds to incidents; the driver acts as a reserve of management.
- The fourth level: high automation, the car is autonomous, selects the route and parking place; appeals to a person when confronted with something unusual.
- The fifth level: full automation, the steering wheel in the car is not needed, everything is controlled by a computer, only passenger seats can be in the cabin.

So far, in general, only the cars with the first level are the most common, but cars with the fifth level are already being tested throughout the world.

In addition to familiar smart homes, machine tools, and the like, artificial intelligence begins to “manage” the traffic. AI analyzing the traffic situation, traffic density, accidents, and weather conditions can rebuild the time of traffic lights, thereby creating “green corridors”, causing special services during accidents and so on. Such systems work in many cities of Europe, Asia, and North America, for which the problem of traffic jams is relevant. Of course, in most cases it is impossible to completely get rid of traffic jams. However, the AI allows improving the situation with traffic, for example, significantly speed up the movement. Perhaps progress will be more noticeable when autonomous cars enter the wide use – another area of artificial intelligence.

On the Internet artificial intelligence is most developed. Even ordinary artificial intelligence programs perform a variety of work, for example, tracking a huge amount of information and making decisions depending on it.

In connection with the widespread use of artificial intelligence, people wonder whether it is dangerous. The use of AI also creates enough problems such as artificial intelligence errors, who will be responsible for these errors as well as unemployment from the fact that artificial intelligence will be able to replace people.

Let's start with the impact of artificial intelligence on the workforce. Many people are afraid that the employer will replace them with robots with artificial intelligence, as it is more cost-effective. Of course, the entrepreneur will modernize its production in favor of automation, it is profitable and convenient. But the emergence of automation systems will also create about the same number of jobs as they have removed, IT-specialists, service personnel, marketers in this area and so on. There is nothing wrong with this, industrialization began centuries ago, and many professions disappeared, but eventually created as many jobs as possible.

Nobody is above making a mistake. Even a perfect program can falter. Also human errors, failures of artificial intelligence have the consequences.

In 2016, the Tesla Model S electric car with activated autopilot mode was involved in a traffic accident in which its driver died. A year later, the commission investigating the incident announced that the driver had ignored the warnings of the autopilot system about the need to keep their hands on the steering wheel. It is worth noting that Tesla cars are equipped with a partial autopilot system, in which the driver is required to take control in a dangerous situation.

How to judge such serious accidents? Is only a man guilty of what he has done? How to punish artificial intelligence? These and similar issues will have to be addressed by the jurisdictions of all countries now. While in incidents related to artificial intelligence people are guilty: the operator did not keep track of the situation, the miscalculation of programmers and the like.

Despite great advances in neurosurgery and IT industry in the knowledge of human consciousness and attempts to do this in a digital code, we are quite far from the artificial intelligence which is described in films and books. A number of factors contribute to this: we still do not understand how a person thinks and what is responsible for his thought, that is, human consciousness. IT-specialists do not understand how and what basis artificial intelligence should be made.

The artificial intelligence we use now is just a semblance of consciousness based on human behavior. Philosophy will play a significant role in the creation of artificial intelligence. Since understanding the essence of what is intelligence and consciousness is a fundamental basis in the development of AI.

We think that it will take more than a dozen years, if not centuries, to create an artificial intelligence that is truly similar to human intelligence. Most likely, they will first integrate the human brain and its consciousness into the digital environment, and only then work on artificial intelligence.

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SCIENTIFIC AND TECHNICAL PROGRESS IN THE UNITED STATES IN THE 2d HALF OF THE 20th CENTURY

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For three decades until the mid-1980s in Western economics the concept of technological progress introduced into the economic system completely dominated in the framework of neoclassical theory. It was proposed and developed in the works of R. Solow, R. Harrod, J. Hicks, J. Tinbergen, and a number of other well-known economists. Scientific and technical progress has a very significant impact on increasing economic growth rates, ensuring the saving of energy and raw materials, the release of labor, the solution of social problems by improving working and living conditions, improving the quality of consumer goods.

In the modern world, the economic power of a country is determined not so much by the volume of GNP produced and the availability of capital and labor resources, but by the size of its scientific and technical potential, the efficiency of its use, expressed in the number of inventions and discoveries, new types of products, first of all, equipment and technologies.

Scientific and technical potential has become today a resource of a special kind, without it modern competitive production becomes impossible. The country's scientific and technical potential is the cumulative resource of its scientific and technical sphere, creating new products and technologies. It is inextricably linked to the economic resource, although it may be relatively more or less than the latter. You can talk about the national scientific and technical potential, the scientific and technical potential of the industry, company, university, research institute, laboratory and, finally, an individual scientist, designer or creative engineer. Scientific and technical potential, however, is determined not only by the amount of available scientific and technical resources, but also by their quality, ability to manage these resources, properly assess prospects, the internal interest of scientists in discoveries and inventions.

At present, the importance of scientific and technological progress (NTP) for reproduction and economic growth in general is quite explicable and profound interest is manifested in everything that can both accelerate and make scientific search more productive.

Technological orders

The alternation of business cycles is usually associated with the change of technological structures in social production. The concept of “order” means the arrangement, the established order of organizing something. The technological structure is characterized by a single technical level of its components of production connected by vertical and horizontal flows of qualitatively homogeneous resources based on the common resources of skilled labor, common scientific and technical potential, etc. The term was introduced into science by Russian economists D. S. Lvov and S. Yu Glazyev.

The fifth industrial technological order (1990-2040)

The main resource is nuclear power. The main industries are electronics and microelectronics, information technology, genetic engineering, software, telecommunications, space exploration. The key factor is microelectronic components. Achievement of lifestyle is individualization of production and consumption. Humanitarian advantage is globalization, speed of communication and movement.

It relies on the possibilities of electronic and nuclear energy, innovations in the field of microelectronics, information technology, and genetic engineering, biotechnology which led to the exploration of outer space, the emergence of satellite communications and other human capabilities. Now it is difficult to imagine the production and life of citizens in all spheres of life without video and audio equipment, mobile phones, the Internet, etc. And the globalization of the economy has become possible as a result of the technical revolution based on the development of inventions of the fifth technological order: the speed of movement in the world of products and capital has dramatically increased. Thus, the speed of making payments anywhere in the world is seconds; in real time, operations are carried out on the stock markets of the world; remote communication control of technological operations in mines, mines, agricultural fields located in remote areas, movement of ships, cars, etc is carried out through communication satellites.

Mankind has not yet had time to fully master the possibilities of the fifth technological order, as the next sixth order loomed on the horizon, the applied era of which is already beginning.

To characterize the impact of new scientific and technological advances on production and the trade balance during the distribution of the fifth technological order, we use published aggregated statistical data for 68 countries (WEFA Group's Global Industry Model Database) and conclusions from the analysis of these data prepared by experts from the US National Science Foundation.

As follows from the published data, for the period approximately corresponding to the initial stage of formation of the fifth technological order (1980–2001), the production of high-tech products (in monetary terms), taking into

account inflation rates, increased annually on average by about 6.2%, while the production of other types of products is only 2.7% per year.

Experts of the OECD (Organization for Economic Cooperation and Development), based on a number of accepted criteria of high technology (for example, R&D costs in relation to the value added or the supply of the industry), are among the most knowledgeable industries: · aerospace industry; · production of office and computer equipment; · communication industry; · pharmaceutical and medical industry.

The undisputed leader in the production of high-tech products in all the years under consideration remained the United States. Their share in 2001 accounted for about 32% of the global high-tech production. However, this figure is much higher than that of Western European countries, which gradually lost ground.

The share of German companies in the output of global high-tech products decreased from 8% in 1980 to less than 6% in 2001; UK companies - from 7% to 4.4%; Italian companies for the same period - from 2.5 to less than 1%. French companies once produced 4.5% of the world's high-tech products, but in 2001 their share fell to 3%.

In the manufacture of aerospace products throughout the period under review there was a significant advantage of the United States. In the early 1980s of the past century, they accounted for about 2/3 of the world market. However, in the 1990s their share decreased, according to American estimates, to 51%.

In the field of computer and office equipment, the United States was able to restore its former leadership positions in 1994 and by 2001 accounted for approximately 47.3% of world demand, while Japan's share fell by 30%.

In the field of pharmaceutical and medical industry, the United States maintained in 1980-1990 their leading position in the global market and even increased their lead over Japan. If in 1980 this gap was 8.5%, by 2001 it had increased to almost 15%. On the 3rd, 4th and 5th places in 2001 were Germany, Great Britain and France, respectively.

The spread of new technologies has affected the state of the sphere of not only production, but also services, which has been developing in recent decades in a number of industrialized countries at a faster pace (for example, in the USA, according to the Ministry of Commerce of this country, the share of the service sector in GDP increased from 49% in 1959 up to 64% in 2001).

The volume of services provided by sectors of this field that actively use new knowledge increased in the period under review at almost the same rate as the volume of industrial production of high-tech products (4.6% and 5.1%, respectively, on average from 1980 to 2001 against 2,5% in other manufacturing industries). This applies primarily to communications services, financial, business (including application software), educational and medical services. Their total volume increased from \$ 3.4 to \$ 7.4 billion (at constant 2001 prices). The largest share among the listed industries falls on business services (38% in 2001) followed by financial services (25%) and communications services (11%).

The leading position in the volume of business services provided is occupied by US companies (34.4% of the revenues of this service industry in 2001). They are followed by Japan (14.7%), Germany (10.0%) and France (9.8%). This provision is not surprising, given the leading position of American firms in a number of areas of information technology development, the number of potential consumers of business services, which is at least in proportion to the scale of the national economy.

According to published data in 2001, the United States was the world's leading exporter in three of the four high-tech sectors considered above and only in one (the pharmaceutical and medical industries) ranked third. In at least three of the four high-tech branches of American industry with the exception of the communications industry there was a tendency to a decrease in the share of exports in the world market.

This is primarily due to the export expansion of the newly industrialized countries of Asia. For example, global exports of communications equipment produced in South Korea increased from 2.9% in 1980 to 7.8% in 2001. Similarly, exports of computer equipment from Singapore's production increased from 4.8 to 9 over the same period. 9%. Other new industrialized countries of the Asian continent demonstrate high growth potential in these two industries.

In the 1990s a steady increase in the share of high-tech products in American trade was observed. The volume of trade in industrial goods in 2001 exceeded 1.6 billion dollars. 343 billion dollars accounted for goods produced or associated with the use of advanced technologies. Moreover, the share of products using new technologies in exports (28%) was significantly higher than in imports (17%).

The largest excess of exports over imports (\$ 39 billion) was provided by aerospace products. Along with this, a positive balance in the range of \$ 2 billion was achieved in the trade in biotechnological products, computer integrated technology complexes, construction materials, weapons and nuclear technologies.

In 2001 exports of American electronics exceeded imports by \$ 4.2 billion, which can partly be explained by the economic problems that have arisen for Asian countries and the increase in the dollar rate during the period under review, which has made imports of electronics products less profitable for the United States.

In the United States, Finland and some other countries the growth of multi-factor productivity is associated with innovations in the field of information technology and telecommunications. Within the new manufacturing industries themselves, the increase in multi-factor productivity is partly due to the creation of new innovative firms that use the resources at their disposal more efficiently compared to long-standing companies.

According to the OECD experts, the most promising levers of state policy for the long term, in addition to traditional measures to mobilize labor resources and increase investment, are actions that promote the involvement in the process of economic growth of information and telecommunication technologies, human capital, innovation and entrepreneurial activity.

The United States continues to occupy a leading position in promoting the market and services based on the fifth order technology, but there is a tendency to reduce the separation of this power from other industrialized countries. The second place in the majority of the positions considered above falls on the share of Japan. However, in recent years, Japan has been characterized by some slowdown in the pace of technological development. The same can be said about the leading countries of Western Europe, seeking to maintain their positions and even outrun competitors in a number of areas, making extensive use of the advantages of international economic integration and scientific and technical cooperation.

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SCIENTIFIC AND TECHNICAL PROGRESS IN RUSSIA:
STATUS AND PROSPECTS

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Scientific and technical progress (STP) is a progressive movement of science and technology, the evolutionary development of all elements of the productive forces of social production on the basis of a broad knowledge and development of the external forces of nature; it is an objective, constantly acting pattern of development of material production, the result of which is a consistent improvement of technology, technology and organization of production, their efficiency improvement. It also acts as an important means of solving social and economic problems, such as improving working conditions, environmental protection, and ultimately raising the welfare of the people. Scientific and technological progress allows strengthening the country's defense.

The gradual development of social production, its constant improvement is the fundamental laws of the economic life of mankind. They are based on the progress of science and technology. This process is often referred to as economic progress. However, this is not the correct point of view. Economic progress is a complex and multifaceted phenomenon, the evaluation of which involves the use of various criteria and a system of indicators that can be used to assess the state of development of productive forces and industrial relations, and ultimately – the social mode of production as a whole. One of these criteria of economic progress is

the level of development of science and technology. It is a concentrated expression of only organizational and economic relations, which are a usual thing in all periods of development of society.

Scientific and technological progress over the millennia of human civilization has passed a complex and controversial path of development. This was due to the fact that technological progress in the early stages of development of society was carried out separately from scientific progress until the end of 18-19 centuries. And only during the industrial revolution a rapid convergence of scientific and technological progress began and there was an entire scientific and technological progress (STP). Since that time, the process of turning science into a direct productive force began, which lasted about a century and a half and ended in the mid-50s of the 20 century with the deployment of the scientific and technological revolution.

Today, the world consists of four main centers of scientific progress - the United States, the European Union, Japan and China. The Russian Federation is not included into the group leaders, and won't be able to take a leadership position without the development of scientific potential of the country.

Most of the leading countries have a deliberate strategy of scientific and technological development, which is implemented in practice and is equipped with the allocation of significant financial resources. The main focus of these programs is on increasing public investment in R&D (Research and Development) in the most important sectors, stimulating domestic demand for high-tech products, taking comprehensive measures to promote innovation activity of the private sector, especially small and medium-sized businesses, as well as the training of qualified scientific and engineering personnel.

All of the above-mentioned allows us to conclude that Russia's entry into the ranks of the leaders of global scientific and technological development requires the implementation of the state strategy to support R&D and innovation as soon as possible.

The current situation is the result of the application of neoliberal economic concepts in Russia, according to which every state intervention in the economy leads to negative consequences. This belief in the "invisible hand of the market" has also affected state policy in the scientific sphere. Science is not considered as a factor of social and economic development of the country. There was a denationalization of Russian science. It is necessary to confirm that the scientific policy in the country is practically absent. If this trend is not reversed, all these factors will lead to the degradation of scientific and technological capacity.

In these circumstances, almost the only surviving stronghold of science in our country was the Russian Academy of Sciences, which main task is to carry out fundamental research. But the Russian Academy of Sciences suffered considerable losses. It is no secret that for many years the Academy has been fighting for survival.

Currently, R&D financing is only slightly more than 1% of GDP, and innovation activity has a negative trend. For example, the share of enterprises engaged in technological innovation declined from 10.5% in 2004 to 9.6% in 2008.

But the biggest problem is not the low level of funding, but a lack of demand for science. The destruction of the Russian Academy of Sciences will contribute to the further degradation of human capital and social infrastructure in our country. The fundamental science of Russia is a competitive advantage of the country, and it is necessary to develop this advantage. Taking into account the critical importance of science and innovation in making the post-industrial model of development (“knowledge society”) in the 21st century, the role of power centers is in a globalizing world with strong scientific and technological potential.

Innovation activity in Russia remains extremely low and even with a downward trend. In 2008, the share of enterprises implementing innovations reached 10.8% (respectively, in 2002 - 14.6% and in 2007 - 11.5%). The market for innovative products almost does not develop: in 2008 it accounted for 5.9% in the total volume of industrial products sold (in 2002 - 7% and in 2007 - 6.7%).

The current situation poses a threat to Russia's national security. If we do not change the approach to science, there will be the preservation of the primitive structure of the economy, strengthening the scientific and technological backwardness of the country, further reducing the international competitiveness of domestic non-raw materials and considering Russia as raw materials appendage of world leaders.

During the current modernization of Russia, it is proposed to rely on the spheres of activity and sectors of the economy, where our country can acquire exceptional opportunities and advantages at the expense of its monopoly historical and geographical assets, as well as intellectual and technological resources created during the period of incomplete Soviet modernization. These include, in particular, the development of new energy technologies, transcontinental transit, environmentally friendly agriculture, the development of exclusive software products, and the latest biological and medical technologies, as well as humanitarian technologies, information technologies, etc.

Russia has the potential for development in all these areas. No matter what will be the leading industry of the future, these areas will be in demand in the new technological way.

Scientific and technological progress is an important power of economic growth. It covers a number of phenomena that characterize the improvement of the production process. Scientific and technological progress includes the improvement of technologies, new methods and forms of management and organization of production. Scientific and technological progress allows new ways to combine the data resources with the aim of increasing the ultimate production. At the same time, as a rule, there are new, more efficient industries.

In the context of the formation of market relations, the scientific and technical revolution requires significant structural and qualitative changes in production fixed assets. The growth of economic power in recent decades has been extensive.

The scientific, technical and production base of our country does not meet the requirements of intensification of social production. More than 50% of the equipment and machines have been in operation for more than 10 years, while the equipment turnover in Japan is 6-8 years, and in European countries – 10-12 years. The situation was particularly difficult in the old industrial regions of the European part of Russia, where the existing enterprises were not subjected to reconstruction and technical re-equipment for a long time. The solution of the problem of increasing the efficiency of social production in the country is possible only with the acceleration of scientific and technological progress. It is also necessary to pay attention to the improvement of general education, as well as skills and competencies required for the manifestation of technical and business ingenuity on the world stage.

The implementation of scientific and technological progress affects the formation of territorial economic proportions and affects the territorial division of labor. Great importance is in the formation of territorial proportions of economic factors: capital investment, development of fixed assets, etc.

The increase in efficient production becomes the main factor of economic growth. The Russian government is working on a number of new initiatives to overcome the problems faced by the Russian economy during the crisis. In particular, initiatives in the tax sphere and measures to support innovations in industry are being prepared; the issue of exemption from property tax in the first year of operation of new energy-efficient equipment is being worked out. Also the question of the reduction from 10 to 2-5 years the depreciation periods of individual types of intangible assets that are important for technological innovative development of enterprises, the expansion of the list of R&D for the application of a multiplying factor in the attribution of costs is discussed.

Russia's membership in the WTO, the intensification of activities within the framework of the Eurasian economic Union, projects in the field of digitalization of the economy, participation in global value chains will improve the situation and contribute to the modernization of the domestic economy. Greater openness of the Russian market, adaptation of domestic legislation to international norms and "best" practices, greater integration into the global economic system will contribute to the improvement of the business environment in Russia, the growth of competitiveness and investment attractiveness of services and technologies. The adoption of a number of measures, which have long been pointed out by the expert community, will act in the same direction:

- improvement of legislation, control over the implementation of decisions and programs;
- reduction of administrative barriers that delay and increase the cost of intellectual property registration;
- introduction of tax incentives for innovative activity of enterprises;
- improving the financing of the whole sphere of research and development.

Successful innovation leads to a kind of closed circle: when a certain critical level is reached, investment attracts investment, talent attracts talent, and innovation generates innovation.

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THE LANGUAGE PROBLEM OF ARTIFICIAL INTELLIGENCE

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Have you ever come across artificial intelligence systems? We believe the majority answer will be positive. After all, Artificial Intelligence has already ceased to be "something beyond fiction." Speech recognition systems from Siri, IBM Watson, ViaVoice, virtual players Deep Blue, AlphaGo, and even early systems such as MYCIN, developed at the Stanford University in the 1970s, designed to diagnose bacteria that cause severe infections, as well as recommend the right amount of antibiotics are all variations on Artificial Intelligence. But, despite the fact that technology is rapidly gaining momentum, modern systems are still very "angular", and the main problem that researchers face is language training. Making the system speak is not difficult, but no one has yet succeeded in explaining to it the "physics" of the surrounding world.

The main problem of processing natural language is linguistic ambiguity. There are various kinds of ambiguity: syntactic (structural), semantic ambiguity, case ambiguity etc. The central problem, and all this for the applied processing of natural language, is the resolution of this kind of ambiguity. General processing requires applied processing systems work in narrow subject areas. Nevertheless, the creation of systems that have the ability to communicate in a natural language in wide areas is possible, although for now the results are far from satisfactory. As computer systems evolve, it becomes more and more obvious that the use of these systems will greatly expand if it becomes possible to use human speech when working directly with a computer, and in particular, it will be possible to control the machine with a real-time voice, as well as input and output information in the form of ordinary human speech. Existing speech recognition technologies do not yet have sufficient opportunities for their widespread use, but at this stage of research, an intensive search is being conducted for the possibilities of using short

multi-valued words (procedures) to facilitate understanding. Speech recognition has now found a real use in life, perhaps, only in cases where the used dictionary is reduced to 10 characters, for example, when processing credit card numbers and other access codes in computer-based systems that process data transmitted by telephone. So the urgent task - the recognition of at least 20 thousand words of a natural language - is still unattainable. These features are not yet available for widespread commercial use. However, a number of companies are trying to use the knowledge that already exists in this field of science.

For successful speech recognition the following tasks should be solved:

- 1) dictionary processing (phoneme composition);
- 2) syntax processing;
- 3) reduction of speech (including the possible use of hard scenarios);
- 4) the choice of speaker (including age, gender, mother tongue and dialect), the training of speakers;
- 5) the choice of a particular type of microphone (taking into account the direction and location of the microphone);
- 6) the operating conditions of the system and obtaining the result with an indication of errors.

The existing speech recognition systems today are based on the collection of all the available information necessary for word recognition. Researchers believe that in this way the problem of recognizing a speech pattern, based on the quality of the signal must be changed, but, nevertheless, at present, even with the recognition of small messages of normal speech, it is not possible yet after receiving various real signals transformation into linguistic symbols.

Kwok Lee, one of the researchers who participated in the development of its newest Artificial Intelligence solutions, talks about the idea of a machine capable of supporting a real conversation.

There is only one problem that quickly becomes apparent as you monitor other system responses. When Lee asked, "How many legs does a cat have?", the system responded: "Four, I guess." After that, he made another attempt: "How many legs does a centipede have?" The answer was curious: "Eight." In essence, Lee's program has no idea what it is talking about. It understands that certain combinations of characters can occur together, but it has no idea about the existence of the real. It doesn't know what the centipede really looks like, or how it moves. That is, we still have only an illusion of intellect, devoid of the very common sense that we humans perceive as something taken for granted.

This approach is close to how children learn about the world, constantly associating words with objects, relationships, and actions. However, this is where the analogy of human learning ends. Small children do not need to see a dog riding a skateboard to represent it in mind or to describe it with words. Kwok Lee believes that modern machine learning and Artificial Intelligence tools are not enough to make the dream of a true Artificial Intelligence come true. According to the scientist, Artificial Intelligence researchers will also have to think about taking

into account such aspects as emotional intelligence and social communication skills.

If Artificial Intelligence is destined to become an omnipresent tool that people will use to transform their own intelligence, and that they will trust in solving problems through close cooperation, the language should be the key to this relationship. This need is of particular relevance because in-depth training and other techniques, in essence, allow artificial intelligence programs to program themselves.

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ECO-FRIENDLY TECHNOLOGIES IN CONSTRUCTION

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Nowadays people face a lot of ecological problems such as pollution, global warming, nature destruction and resource depletion which can kill our civilization. The whole world is searching for new means to save the environment.

Today the construction industry is one of the largest “suppliers” of the environmental pollution. Buildings have often a negative impact on our environment. This includes transporting materials on long distances, emissions of hazardous chemicals from many buildings, huge energy consumption and use of harmful non-recyclable materials.

Many engineers and architects are now trying to design eco-friendly and energy-saving buildings. “Green building is not only a wise choice for our future; it is also a necessary choice. The construction industry must adopt eco-friendly practices and materials that reduce its impacts, before we reach a point of irreversible damage to our life supporting systems” [4].

For example, one of the basic principles of ecological construction is the use of natural renewable materials. That’s why property is given to materials like wood, straw, clay and even rammed earth. Natural biodegradable materials will help to avoid the formation of giant landfills and soil pollution with chemical waste.

Wood as a building material is getting more popular nowadays. It is not only renewable but also stores carbon itself and produces less CO₂ emissions. “The

process that creates structural engineered wood products takes far less energy than steel, cement or concrete and produces fewer greenhouse gases during manufacturing” [3]. Some architects predict that in the future most of the houses will be made of wood.

Also preference is given to those materials that are located in the building construction site to reduce negative impact of transport.

Another important factor is the energy efficiency of the building. In eco-construction alternative energy sources are widely-used. For example, solar panels, wind generators in conjunction with biofuel heating and high thermal insulation make the building energy efficient.

Saving energy and water also saves money, that’s why people become interested in energy-saving technologies.

For saving warm air inside, heat recovery ventilation systems are used. This technology captures the heat generated by appliances and the people living in it, and transfers it from exiting stale air to incoming fresh air. Water can be collected from the roof and stored in a special tank.

Smart home technology can also help to save energy by monitoring energy and water use. Modern refrigerators, washing machines and dishwashers contain smart meters that collect real-time data and can exchange it with different devices for more efficient use of energy.

Nowadays it is very important to develop green technologies, advance eco-construction and build a sustainable future.

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DARK ENERGY

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Dark energy in cosmology is a hypothetical type of energy introduced into the mathematical model of the Universe for the sake of explaining its observed expansion with acceleration.

There are three options for explaining the essence of dark energy:

- dark energy is a cosmological constant – a constant energy density that fills the space of the Universe (in other words, non-zero energy and vacuum pressure are postulated);
- dark energy is a certain quintessence – a dynamic field, the energy density of which can vary in space and time.
- dark energy is modified gravity at distances of the order of the size of the visible part of the Universe.

By the present days all known reliable observational data do not contradict the first hypothesis, so it is accepted as standard in cosmology. The final choice between variants requires very long and highly accurate measurements of the rate of expansion of the Universe in order to understand how this speed changes over time. The rate of expansion of the universe is described by the cosmological equation of state. Solving the equation of state for dark energy is one of the most pressing problems of modern observational cosmology.

According to the observational data from the Planck Space Observatory published in March 2013, the total mass-energy of the observed Universe consists of 68.3% dark energy and 26.8% dark matter.

Based on observations made in the late 1990s of type Ia supernovae stars, it was concluded that the expansion of the universe accelerates over time. Then these observations were supported by other sources: measurements of the background radiation, gravitational lensing, and the Big Bang nucleosynthesis. All the data obtained fits well into the lambda CDM model.

Distances to other galaxies are determined by measuring their red shift. According to the Hubble law, the amount of red shift of light from distant galaxies is directly proportional to the distance to these galaxies. The ratio between distance and red shift is called the Hubble parameter (or the Hubble constant).

However, the value of the Hubble parameter itself must first be established in some way, and for this it is necessary to measure the red shift values for galaxies, the distances to which have already been calculated by other methods. To do this, astronomy uses “standard candles”, that is, objects which luminosity is known. The best type of “standard candle” for cosmological observations are type Ia supernovae (all flashing Ia located at the same distance should have almost the same observed brightness; it is advisable to make corrections for the rotation and composition of the original star). Comparing the observed brightness of supernovae in different galaxies, we can determine the distances to these galaxies.

At the end of the 1990s, it was discovered that in distant galaxies, the distance to which was determined by the Hubble law, type Ia supernovae have a brightness lower than it should. In other words, the distance to these galaxies, calculated by the method of “standard candles” (supernova Ia), is greater than the distance

calculated on the basis of the previously established value of the Hubble parameter. It was concluded that the universe is not just expanding, it expands with acceleration.

Previously existing cosmological models assumed that the expansion of the universe is slowing. They proceeded from the assumption that the main part of the mass of the Universe is composed of matter - both visible and invisible (dark matter). Based on new observations indicating acceleration of expansion, the existence of an unknown type of energy with negative pressure was postulated. It was called “dark energy”.

The hypothesis of the existence of dark energy (whatever it may be) solves the so-called “problem of the invisible mass”. The Big Bang nucleosynthesis theory explains the formation of light chemical elements in the young Universe, such as helium, deuterium and lithium. The theory of the large-scale structure of the universe explains the formation of the structure of the universe: the formation of stars, quasars, galaxies and clusters of galaxies. Both of these theories suggest that the density of baryonic matter and dark matter is about 30% of the critical density required for the formation of a “closed” Universe, that is, it corresponds to the density required for the shape of the Universe to be flat. The measurements of the detected the cosmic background radiation of the Universe, recently carried out by the WMAP satellite, show that space-time in the Universe does indeed have a global curvature very close to zero. Consequently, some previously unknown form of invisible energy should give the missing 70% of the density of the Universe.

The essence of dark energy is the subject of controversy. It is known that it is distributed evenly, has a low density and does not interact with ordinary matter by means of known fundamental types of interaction - with the exception of gravity. Since the hypothetical density of dark energy is low (about 10^{-29} g / cm³), it is unlikely to be detected by laboratory experiment. Dark energy can have such a profound effect on the Universe (making up 70% of all energy) only because it fills the space.

It is estimated that the accelerating expansion of the universe began about 5 billion years ago. It is assumed that before this expansion was slowed down due to the gravitational action of dark matter and baryonic matter. The density of baryonic matter in an expanding Universe decreases faster than the density of dark energy. In the end, dark energy begins to prevail. For example, when the volume of the Universe doubles, the density of baryonic matter decreases by half, and the density of dark energy remains almost unchanged (or exactly the same - in the version with a cosmological constant).

If the accelerating expansion of the Universe continues indefinitely as a result of a galaxy outside our superclusters, galaxies will sooner or later go beyond the horizon of events and become invisible to us, since their relative speed will exceed the speed of light. This is not a violation of the special theory of relativity. In fact, it is impossible to even determine the “relative speed” in a curved space-time. The relative speed makes sense and can only be determined in a flat space-time, or on a sufficiently small (zero-striking) portion of the curved space-time. Any form of

communication beyond the event horizon becomes impossible, and any contact between objects is lost. The Earth, the Solar System, our Galaxy, and our supercluster will be visible to each other and in principle attainable through space flight, while the rest of the Universe will disappear away. Over time, our supercluster will come to a state of thermal death, that is, the scenario assumed for the previous, flat model of the Universe with a predominance of matter will come true.

There are also more exotic hypotheses about the future of the Universe. One of them suggests that phantom energy will lead to the so-called “divergent” expansion. This implies that the expanding force of the dark energy will continue to increase indefinitely until it surpasses all other forces in the Universe. In this case, dark energy will break all gravitationally bound structures of the Universe, then surpass the forces of electrostatic and intranuclear interactions, break apart atoms, nuclei and nucleons and destroy the Universe in the Big Gap.

On the other hand, dark energy can dissipate over time, or even change the repulsive effect to attracting. In this case, gravity will prevail and lead the Universe to a “Big Compression”. Some assumptions suggest a “cyclic model” of the universe. Although these hypotheses are not yet confirmed by observations, they are not completely rejected. Accurate measurements of the rate of acceleration should play a decisive role in determining the final fate of the Universe (developing according to the theory of the Big Bang).

Accelerated expansion of the Universe was discovered in 1998 when observing type Ia supernovae. For this discovery, Sol Perlmutter, Brian P. Schmidt, and Adam Riess received the Shao Astronomy Prize for 2006 and the Nobel Prize in Physics in 2011.

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СЕКЦИЯ «НАУЧНЫЕ ИССЛЕДОВАНИЯ В ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ»

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ОСНОВНЫЕ И РУКОВОДЯЩИЕ ПРИНЦИПЫ БУХГАЛТЕРСКОГО УЧЕТА В США

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Существуют общие правила и понятия, которые регулируют область бухгалтерского учета. Эти общие правила, называемые основными и руководящими принципами бухгалтерского учета, образуют базис, на котором основываются более подробные и сложные правила бухгалтерского учета. Например, Совет по стандартам финансовой отчетности (FASB) использует базовые и руководящие принципы бухгалтерского учета в качестве основы для своего собственного подробного и всеобъемлющего набора правил и стандартов бухгалтерского учета.

«Общепринятые принципы бухгалтерского учета» (или «GAAP») состоит из трех важных правил: 1) основные и руководящие принципы бухгалтерского учета; 2) подробные правила и стандарты, выпущенные FASB и его предшественником Советом по принципам бухгалтерского учета (APB) и 3) общепринятые отраслевые практики. [2, с.39]

Если компания распространяет свою финансовую отчетность для общественности, она должна следовать общепринятым принципам бухгалтерского учета при подготовке этих отчетов. Кроме того, если акции компании обращаются на бирже, федеральный закон требует, чтобы финансовая отчетность компании проверялась независимыми бухгалтерами.

Мы можем рассмотреть более подробно основные принципы бухгалтерского учёта:

1. Бухгалтер хранит все бизнес-операции единоличного владения отдельно от личных транзакций владельца бизнеса. В юридических целях единоличное владение и его владелец считаются одним юридическим лицом, но для целей бухгалтерского учета они считаются двумя отдельными юридическими лицами.

2. Экономическая активность измеряется в долларах США, и регистрируются только транзакции, которые могут быть выражены в долларах США.

Из-за этого основного принципа бухгалтерского учета предполагается, что покупательная способность доллара не изменилась с течением времени. В результате бухгалтера игнорируют влияние инфляции на зарегистрированные суммы. Например, доллары от транзакций 1960 года объединяются с долларами от транзакций 2018 года.

3. Этот принцип учета предполагает, что можно сообщать о сложных и текущих действиях компании в относительно короткие, четкие временные

интервалы, например, как пять месяцев, закончившихся 31 мая 2018 года, или 5 недель, закончившихся 1 мая 2018 года. Чем короче время интервала, тем более вероятно, что бухгалтер должен оценить суммы, относящиеся к этому периоду. Обязательно, чтобы временной интервал (или период времени) указывался в заголовке каждого отчета о прибылях и убытках, отчета о собственном капитале и отчета о движении денежных средств.

4. С точки зрения бухгалтера, термин «стоимость» относится к потраченной сумме (денежные средства или денежный эквивалент), когда товар или услуга были первоначально получены, независимо от того, была ли эта покупка совершена в прошлом году или тридцать лет назад. По этой причине суммы, указанные в финансовой отчетности, называются историческими суммами затрат. Из-за этого принципа бухгалтерского учета суммы активов не корректируются с учетом инфляции. Фактически, как правило, суммы активов не корректируются для отражения какого-либо увеличения стоимости. Следовательно, сумма актива не отражает сумму денег, которую компания получила бы, если бы она продала актив по сегодняшней рыночной стоимости.

5. Если определенная информация важна для инвестора или кредитора, использующего финансовую отчетность, эта информация должна быть раскрыта в отчете или в примечаниях к заявлению. Именно из-за этого основного принципа бухгалтерского учета к финансовым отчетам часто прикрепляются многочисленные страницы «сносок». Компания обычно указывает свою важную учетную политику в качестве первого примечания к своей финансовой отчетности.

6. Этот принцип учета предполагает, что компания будет продолжать существовать достаточно долго, чтобы выполнять свои задачи и обязательства, и не будет ликвидирована в обозримом будущем. Если финансовое положение компании таково, что бухгалтер считает, что компания не сможет продолжать, бухгалтер обязан раскрыть эту оценку. Принцип непрерывной деятельности позволяет компании отложить некоторые из своих расходов будущих периодов до будущих отчетных периодов.

7. Этот принцип учета требует от компаний использования метода начисления. Принцип соответствия требует, чтобы расходы соответствовали доходам.

8. При учете методом начисления (в отличие от учета по кассовому методу) выручка признается сразу после продажи продукта или оказания услуги независимо от того, когда деньги были фактически получены. Согласно этому основному принципу бухгалтерского учета, компания могла заработать и отчитаться о 20 000 долл. США за первый месяц работы, но получить 0 долл. наличными в текущем месяце.

9. Из-за этого основного принципа бухгалтерского учета бухгалтер может допустить нарушение другого принципа бухгалтерского учета, если

сумма является незначительной. Профессиональное суждение необходимо, чтобы решить, является ли сумма незначительной или несущественной.

Из-за существенности финансовые отчеты обычно показывают суммы, округленные до ближайшего доллара, до ближайшей тысячи или до ближайшего миллиона долларов, в зависимости от размера компании.

10. Принцип консерватизма заключается в том, что если перед бухгалтером стоит выбор, как провести операцию: по старым законам и правилам или уже по новым, бухгалтер выбирает старые, проверенные способы. Если возникает ситуация, когда есть две приемлемые альтернативы для отчета по статье, консерватизм предписывает бухгалтеру выбрать альтернативу, которая приведет к уменьшению чистого дохода и / или уменьшению суммы активов. Консерватизм помогает бухгалтеру «разорвать галстук». Это не заставляет бухгалтеров быть консервативными. Ожидается, что бухгалтеры будут объективными и объективными.

Основной принцип учета консерватизма побуждает бухгалтеров прогнозировать или раскрывать убытки, но он не допускает аналогичных действий для получения прибыли.

Принципы GAAP чрезвычайно полезны, потому что они пытаются стандартизировать и регулировать бухгалтерские определения, предположения и методы. С их помощью мы можем предположить, что из года в год существует последовательность в методах, используемых для подготовки финансовой отчетности компании. [1, с. 245]

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ИСТОРИЯ ВОЗНИКНОВЕНИЯ БУХГАЛТЕРСКОГО УЧЁТА В КИТАЕ

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Бухгалтерский учет возник в эпоху Палеолита, тогда появился счёт, со временем, в результате счёта стали появляться подручные средства: камни, палочки. С усложнением хозяйственной деятельности появилась необходимость записи прочитанного.

Первые учётные документы, обнаруженные археологами, относятся к 30 веку до н.э. Это зарубки на костях, бивнях. Достижения первобытных людей в области учёта заключается в том, что появились системы счёта и записи, позволяющие регистрировать учётные объекты в натуральных измерителях.

Впервые бухгалтерский учёт появился в Древнем Египте, об этом свидетельствуют работы древнего Грека Мирадота, который писал, что на блоках пирамиды Хиопса, нанесены результаты контроля обеспечения строителей пирамиды Хиопса продовольствием, продуктами питания и другими ресурсами жизнеобеспечения, дошедшие до нас и расшифрованные археологами. Учётная система Древнего Египта была частью системы централизованного управления экономики. Чтобы уметь учитывать требовалось овладеть письмом и счётом. Знаниями обладали писцы, они совмещали в своей деятельности такие функции как: управление, учёт и жречество. И составляли профессиональную касту. Документы писались на папирусах, глиняных черепках, дереве. Для ускорения и точности арифметических расчетов, использовались специальные приборы - абак. Учёт завершался отчётностью по широкому кругу показателей натуральных измерителей.

Другая распространенная версия заключается в том, что бухгалтерский учёт появился в 7 веке до н.э. в Римской империи, в которой установилась система учёта и налогового контроля, носителями которой были кураторы, прокуроры и квесоры.

Третья версия заключается в том, что признаки аудита имели место быть в 3 веке до н.э., начиная с Цинь (221 - 207 до н.э.) и Хань (206 до н.э. - 8г. н.э.) все династии создавали бухгалтерские структуры и назначали лиц, ведавших отчетностью, а также разрабатывали правовые установления. В Древнем Китае, при дворе самого известного китайского императора, первого императора династии Цинь, известного под именем Цинь Шихуаньди. Это был самый жестокий китайский император, который в наследство оставил многомиллионную Терракотову армию, дошедшую как историческое наследие до нас. При нём существовала должность, которая в переводе с древнекитайского языка звучит как главный государственный аудитор, на самом деле это был не полный, в современном понимании аудитор, а человек, который занимался контролем за расходом императорской казны и организовывал её пополнение, в настоящее время назывался бы министром финансов или главным казначеем.

Также в Китае сложилась развитая система учета материальных ценностей. Для учёта распределения поступивших налогов существовала система резервных фондов. Учётные работники находились в трех отделах, где фиксировался приход, расход и остаток ценностей. Первый и второй отделы показывали движение ценностей, а третий проводил инвентаризации и выводил натуральный остаток, но не знал остатка учетного. Это приводило к тому, что только высшая администрация имела представление о должном положении дел. При учёте материальных ценностей в Китае получила распространение так называемая четырёхколонная система:

Приход – Расход = Конечный остаток - Начальный остаток

Это является уравнением материального баланса. Его заполнение требовало, чтобы каждое поступление и отпуск ценностей оформлялось

актом. Учёт велся в красных списках, именно в них записывали данные актов. Для их проверки один из экземпляров списка отправляли в центральное управление. Служащие склада могли занимать место только три года, а затем после инвентаризации передавали ценности в течение 15 дней. Так как управлять этой системой было очень сложно, следовательно, отчётность представляли каждые 10, 30 дней и ежегодно. Контролировали всю эту систему ревизоры, которые выбирались из числа чиновников, находящихся выше по должностным обязанностям, чем проверяемые. В законе «Саолуй» было сказано, что при составлении отчетности необходимо указывать фактические данные, избегать ошибок. Там же расписывалась процедура сведения отчетности, и приводились методы учета потерь имущества.

Таким образом, организация складского хозяйства в Китае проводилась по принципу "первая партия получена - первая отпущена", что свидетельствует о чётком учёте ценностей. Контрольную функцию выполняли осведомители, именно они находились среди выше упомянутых складских работников.

В Китае, в отличие от Древней Греции, Рима и Месопотамии, учётные системы не были ориентированы на такие должности как: священнослужители, владельцы поместий и торговцев, здесь государство вело учёт в более крупномасштабных величинах.

Ранее эпохи династии Цинь, во время правления прежней династии Чжоу, а это 1256-1122 года до нашей эры, уже применялась система государственной учётности, она была описана в трудах счетоводства того времени. Этот тип бухгалтерского учёта велся в соответствии с феодальным и экспансионистским характером правления данной династии, когда в учёте брали в расчёт не только необходимость сбора налога для пополнения императорской казны, но и многоуровневую иерархическую систему чиновничьего аппарата, и огромные географические размеры империи. Таким образом, весь прибавочный продукт собирался с территории всей страны и перераспределялся по определённым местам для дальнейшего использования.

Для упрощения работы «бухгалтеров» в то время, император ввёл единые письменные знаки, определил меры веса и длины, установил одинаковую ширину колеи для повозок, учредил обязательные для всех законы, кара за которые порой заканчивалась смертной казнью. Ведь за несоблюдение законов и норм ведения учёта, растрат, выносили сметный приговор, как и самому чиновнику, так и всей его семье. Многие историки считают, что данные карательные меры были оправданы, ведь форма бухгалтерского учёта того времени, эпохи Чжоу, были очень эффективными и весьма адаптированными к существовавшей тогда социально-политической системе.

В ханьском законоположении «Шапцзи-луй» была определена система представления отчётности на проверку в столицу, по которой

предусматривалось ежегодное представление отчетности каждой инстанцией снизу доверху. За нарушение сроков и недостоверность определялась мера наказания.

Династии Суй (581-618) и Тан (618-907) также имели специальные системы ведения записей и счетов, наказаний за недостоверность четных докладов.

Точно сказать: где и как начал своё развитие бухгалтерский учёт – невозможно, но свой ранний расцвет он получил в Китае, в усовершенствованном государственном аппарате, с чёткой констатацией фактов хозяйственной жизни всех сфер государственной деятельности.

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MICROPROCESSOR STRUCTURE AND ITS MAIN CHARACTERISTICS

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Computers have been widely used since the 1950s. Formerly, these were very large and expensive devices used only in state institutions and large firms. The size and shape of digital computers have changed as a result of the development of new devices called microprocessors.

A microprocessor (MP) is a software-controlled electronic digital device designed to process digital information and controls the process of this processing, performed on one or more integrated circuits with a high degree of integration of electronic elements.

In 1970, Marshian Edward Hoff of Intel designed an integrated circuit, similar in function to the central processor, a large computer - the first Intel-4004 microprocessor which was already on sale in 1971.

November 15, 1971 can be considered the beginning of a new era in electronics. On that day the company began selling the world's first Intel 4004 microprocessor.

It was a real breakthrough, because the Intel-4004 MP with a size of less than 3 cm was more productive than the giant ENIAC machine. True, it worked much slower and could process only 4 bits of information (processors of large computers

processed 16 or 32 bits simultaneously), but it also cost the first MP tens of thousands of times cheaper.

A microprocessor is a central unit of a personal computer designed to control the operation of all other units and to perform arithmetic and logical operations on information.

The microprocessor performs the following main functions:

- reading and decrypting commands from main memory;
- reading data from main memory and registers of external device adapters;
- receiving and processing requests and commands from adapters for servicing external devices;
- data processing and recording in the main memory and registers of external device adapters;
- development of control signals for all other nodes and computer units.

The microprocessor includes the following devices.

1. The arithmetic logic unit is designed to perform all arithmetic and logical operations on numerical and symbolic information.

2. The control unit coordinates the interaction of different parts of the computer. Performs the following main functions:

- generates and delivers certain control signals (control pulses) to all blocks of the machine at the right times, due to the specifics of the various operations;
- generates addresses of memory cells used by the operation being performed and transfers these addresses to the appropriate computer units;
- receives from the generator of clock pulses the reverse sequence of pulses.

3. Microprocessor memory is designed for short-term storage, recording and issuing information used in the calculations directly in the next machine cycles. Microprocessor memory is built on registers and is used to ensure high speed of the computer, since the main memory does not always provide the speed of writing, searching and reading information necessary for the efficient operation of the high-speed microprocessor.

4. The microprocessor interface system is designed to communicate with other devices of the computer. It includes:

- internal microprocessor interface;
- buffer storage registers;
- input/output ports and system bus control schemes. (The I/O port is an interface device that allows you to connect another device to the microprocessor.)

Besides the standard external devices, additional microcircuit boards with integrated microcircuits can be connected to the microprocessor and the system bus, expanding and improving the functionality of the microprocessor. These include a math coprocessor, direct memory access controller, input/output coprocessor, interrupt controller, etc.

Mathematical coprocessor is used to accelerate the execution of operations on binary floating-point numbers, on binary-coded decimal numbers, to calculate trigonometric functions. Mathematical coprocessor has its own system of commands and operates in parallel with the main microprocessor, but under the control of the latter. As a result, operations are accelerated dozens of times. The microprocessor models, starting with MP 80486 DX, include the math coprocessor in their structure.

The direct memory access controller frees the microprocessor from direct control of the magnetic disk drives, which significantly improves the effective speed of the computer.

Due to parallel operation with a microprocessor, an input/output coprocessor significantly speeds up the execution of input/output operations when servicing several external devices, frees the microprocessor from processing input/output operations including realizing direct memory access.

An interrupt is a temporary stop of the execution of one program in order to promptly execute another more important currently. The interrupt controller serves the interrupt procedures, accepts the interrupt request from external devices, determines the priority level of this request, and issues an interrupt signal to the microprocessor.

All microprocessors can be divided into several groups:

- Complex Instruction Set Computer (CISC) – CISC or Complex Instruction Set Computer is a computer architecture where instructions are such that a single instruction can execute multiple low level operations like loading from memory, storing into memory or an arithmetic operation etc. It has multiple addressing nodes within single instruction. CISC makes use of very few registers.

- Reduced Instruction Set Computer (RISC) – RISC or Reduced Instruction Set Computer is a computer architecture where instruction are simple and designed to get executed quickly. Instructions get completed in one clock cycle this is because of the optimization of instructions and pipelining (a technique that allows for simultaneous execution of parts, or stages, of instructions to more efficiently process instructions). RISC makes use of multiple registers to avoid large interactions with memory. It has few addressing nodes.

- Explicitly Parallel Instruction Computing (EPIC) – EPIC or Explicitly Parallel Instruction Computing permits computer to execute instructions parallel using compilers. It allows complex instructions execution without using higher clock frequencies. EPIC encodes its instruction into 128 bit bundles. Each bundle contains three instructions which are encoded in 41 bits each and a 5-bit template field (contains information about types of instructions in bundle and which instructions can be executed in parallel).

The most important characteristics of the microprocessor are:

- Clock frequency characterizes the speed of the computer. The processor mode is set by the microcircuit, called the clock pulse generator. A specific number of ticks are allocated for each processor to perform each operation. The clock

frequency indicates how many elementary operations the microprocessor performs in one second. Clock frequency is measured in MHz;

– Processor capacity is the maximum number of digits of a binary number, on which a machine operation can simultaneously be performed. The greater the processor width, the more information it can process per unit of time.

We emphasize that it is the microprocessor that is the core of the system and manages all operations. Its work presents a consistent implementation of micro-sampling-decoding-execution microprocedures. However, the actual sequence of operations in the microprocessor systems is determined by the commands recorded in the program memory.

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APPLICATION OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING TECHNOLOGIES IN POWER ENGINEERING

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This article allows you to see how modern IT technologies have an impact on production processes. The authors consider the use of artificial intelligence and machine learning in the various energy sectors. In particular, the application of these technologies in predicting equipment failure, management of electric networks, search for fuel resources and application in alternative energy is presented.

The rapid development of science and the improvement of technical equipment in the XXI century have had a significant impact on the energy sector as a whole. Today it is hard to imagine this industry without modern computers in control rooms at distribution substations. Nowadays we see how global environmental problems force humanity to produce alternative energy. AI (artificial intelligence) and ML (machine learning) are slowly entering our lives in order to improve it. Recently they appeared in the energy sector. What benefits can they bring?

In 2019 the main areas of application of AI and ML can be divided into three groups:

- Forecasting (using AI algorithms to prognosticate consumption of energy);
- Improving energy efficiency (finding best ways for equipment operation, BD monitoring);

- Intellectualization tasks (processing of the results of monitoring of the state of power facilities);

Now a few words about what is AI, ML and Big Data.

Artificial Intelligence (AI)

The term artificial intelligence was first used by John McCarthy in 1956. But what do we mean by this term? Today it is possible to give at least two definitions of AI:

- This is primarily the direction of IT technologies that are aimed at creating intelligent machines which are capable of rational activity;
- On the other hand, this property of intellectual systems to perform functions similar to human.

Currently, AI is considered limited because it is not capable of thinking. But do not think that the AI is weak. For example, AI AlphaGO won four games out of five in an ancient GO game in 2016 and become better than one of the best players in the world. AI shows similar successes in many fields.

Machine Learning (ML)

Probably this is the most popular term in IT today. Usually, it can be heard about when AI is mentioned. Despite the fact that the two terms are linked, they have different meanings. While AI refers to the simulation of human intelligence, the ML is nothing like a field that enables people to achieve at least some semblance of artificial intelligence. Simply put, the machine learning algorithms allow the machine to exercise on a set of data to learn how to perform the task more efficiently. Sometimes it is even more effective than the man himself.

Big Data (BD)

Big data is the study and application of large data sets that are too complex for traditional management systems relational databases. Some of the most common actions performed on data sets are:

- Capturing data;
- Storing data;
- Data analysis;
- Updating;
- Querying;
- Visualizing the data.

Having acquainted with these technologies, we can now talk about their use in the energy sector. Let's start with the use of AI in alternative energy.

Application of AI in alternative energy

Renewable sources of energy are highly depending on weather. Some companies rely on high-precision forecasts to accelerate their solar storage calculations. The concept of the company Nnergix is not the weather forecast, but electricity forecast. Nnergix uses weather data technology along with machine learning to compile energy forecasts. Not long ago they launched the Sentinel Weather project, which let anyone use historical information and weather forecasts. Energy engineers may be interested in such project. Right now it is possible to make a every-hour forecast for the week.

This combination of AI and renewable energy is one of the fastest growing AI businesses in our time. Developing solutions based on AI for each aspect of the green energy transportation will not only make the use of intelligent security systems cheap, but also provide people an opportunity to massively desalinate water, let scientists attract additional investments in the development of electric vehicles, etc.

Searching energy for traditional energy industry

In addition to weather forecasting and optimizing the use of renewable energy sources, AI and Big Data are used in the exploration and drilling of energy sources from fossil fuels.

Two years ago, Exxon Mobil teamed up with Massachusetts Institute of Technology (MIT) to produce self-learning submersible robots to study the ocean surface. These robots will be equipped with machine learning algorithms that will help them not only learn from their mistakes when conducting research, but also perform the same work as a scientist without any risk.

This robot will investigate and record data in the ocean and use it as data, which can be used for analysis. This information will allow humanity to explore new places for drilling useful resources.

Some countries are collaborating with companies to solve these problems like analysis and forecasting data.

Equipment failure prediction

Machine learning methods can be used to implement predictive maintenance. In essence, these are electric lines, equipment and stations with sensors that collect time series data (data accompanied by a time stamp).

The main goal is to predict equipment failure, avoid outages or downtime, as well as optimize operations and maintenance intervals, thereby reducing maintenance costs.

For example, in the US, companies began to install vector measuring units (PMU) to prevent power line faults.

Events such as blackout in Ohio can now be completely prevented. Ultimately, AI and ML can help power companies move from a reactive maintenance position to a predictive maintenance position.

AI and electrical network management

Electricity is delivered to consumers through a complex network (also known as the electricity grid). The trick in the power system is that power generation and demand for it must always coincide. Otherwise, problems such as power failure and system failure may occur.

Although there are many ways to store energy, the most common is the ancient, but still effective way to store – pumps. It works by pumping water to a certain height, and then collecting it again, allowing it to fall onto the turbines.

When dealing with renewable energy, it is difficult to predict the power generation capacity of a network. Eventually, it depends on several factors such as sunlight and wind.

When large fluctuations in demand occur, it can be very expensive for countries that produce most of their energy from renewable energy sources.

While most countries are switching to green energy, it becomes even more difficult to respond effectively to fluctuations in demand.

Germany, for example, plans to cover 80% of its electricity consumption using renewable energy sources by 2050.

There are two main problems that countries such as Germany will face. First, demand fluctuations. Typically, the demand for electricity is growing rapidly at a certain day or season (for example, at Christmas). The second problem is the weather changes. If there is no wind, or the sky is cloudy, it may be difficult to meet the demand for electricity.

In both cases, additional stations or facilities operating on fossil fuels should compensate for excess demand.

AI and ML technologies are increasingly influencing the development of energy today, replacing a person in dangerous areas, making difficult calculations of electricity consumption and equipment failure forecasts for him both in the short and in the long term. Such technologies will allow bringing the energy sector to a new level: attracting new specialists to service computing systems, eliminating interruptions in the supply of electricity to consumers, etc.

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A NEW BREAKTHROUGH IN THE FIELD OF MICROELECTRONICS AND NANOELECTRONICS

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Humanity has long been trying to improve the conditions of its existence. In primitive society people used various tools of labor, somewhat later they tamed wild animals which began to be useful in everyday life. Years passed, the world changed, people and their needs changed. Now most of us can no longer imagine life without the modern blessings of civilization, the achievements of science,

technology, medicine. The next step in this development will be the development of nanotechnology, in particular, systems of very small size, capable of performing teams of people.

Coal and diamonds, sand and computer chips, cancer and healthy tissue: throughout history, variations in the arrangement of atoms have distinguished the cheap from the cherished, the diseased from the healthy. Arranged one way, atoms make up soil, air, and water; arranged another, they make up ripe strawberries

Our ability to arrange atoms lies in the foundation of technology. We have come far in our atom arranging, from chipping flint for arrowheads to machining aluminum for spaceships. We take pride in our technology, with our lifesaving drugs and desktop computers. Yet our spacecraft are still crude, our computers are still stupid, and the molecules in our tissues still slide into disorder, first destroying health, then life itself.

Technical progress is directed towards the development of more powerful, fast, compact and elegant machines. The limit of this development can be considered machines, the size of a molecule. A machine built from covalently bonded atoms is extremely durable, fast and small. Molecular nanotechnology is engaged in the development, creation and management of such machines. This industry opens up unprecedented, fantastic prospects for human interaction with the world.

Our microelectronic technology has managed to stuff machines as powerful as the room-sized computers of the early 1950s onto a few silicon chips in a pocket-sized computer. Engineers are now making ever smaller devices, slinging herds of atoms at a crystal surface to build up wires and components one tenth the width of a fine hair.

These microcircuits may be small by the standards of flint chippers, but each transistor still holds trillions of atoms, and so-called "microcomputers" are still visible to the naked eye. By the standards of a newer, more powerful technology they will seem gargantuan.

An energy-autonomous system is able to operate, throughout its lifetime, without needing an energy supply other than that naturally available in its environment, which therefore excludes any system linked to the electric grid or which requires battery replacements.

A modern energy-autonomous system usually includes sensor or actuators, an energy harvesting and conversion device, to which storage, signal treatment, and wireless communications elements are almost systematically associated.

The oldest autonomous systems can probably be found in watch-making: in the 1760s, James Cox invented a clock with seemingly perpetual motion, which relied on the energy produced by changes in atmospheric pressure. More recently, Jean-Leon Reutter's Atmos clock, designed to operate for 600 years without human intervention, winds itself up using a gaseous mixture that retracts and dilates at each temperature variation. Let us finally mention mechanical rotor winding, used in many wristwatches, which relies on the movement of the arm. These first examples show the diversity of available energy sources and the

associated conversion techniques. Road signal panels, made autonomous through photovoltaic cells, are another developing application, especially in isolated areas. Another application of these systems is thus linked to the fact that for localization, technical or economic reasons, we cannot link them to a wired communication or supply network. The main applications today are often monitoring and predictive maintenance. Cost reduction due to cable suppression is another motivation.

In parallel to the development of these “large” autonomous systems, a lot of research on energy-autonomous micro- and nanosystems began in the late 1990s. A team from the University of Berkeley introduced the now-famous “Smart Dust” concept. Their aim was to design a 1 mm³ device, which would include a sensor, supply, two-way communication link, and a microprocessor. The conjunction of multiple advances, shown below, allowed for the creation of these energy-autonomous micro- and nanosystems and their associated applications.

The evolution of microelectronic technologies toward ever-smaller scales allows us to integrate all of such system’s functions on a single chip: analog, digital signal control and treatment, and radiofrequency communication functions. Similarly, the size and costs of sensors have greatly decreased due to micro- and nanotechnologies, which are also used to manufacture energy microtransducers. The same trend was observed for batteries. All of these factors, when brought together and synthesized through the most recent manufacturing techniques, paves the way toward very small dimensions for our full system.

For a micro- or nano-scale energy-autonomous system to be realistically feasible its energy consumption must be less than its supply. However, the amount of energy that can be harvested and stored is directly linked to the size of the device: very small sizes are therefore very unfavorable to the microsystem’s energy supply. However, the conjunction of continuous improvements in yields, for

energy harvesting, conversion and storage, and in the power consumption reduction of digital, analog, and radiofrequency circuits have made these autonomous microsystems possible.

An autonomous microsystem must ensure an interface function with the external environment. It thus contains one-or-more sensor, display or actuator elements. These elements require interface electronics to format information. Finally, autonomy almost systematically implies a wireless communication system to exchange information with a distant system. Minimizing the consumption of all these elements is essential to energy autonomy.

With the advent of the new millennium, the era of nanotechnology began. The rapid development of computer technology, on the one hand, will stimulate research in the field of nanotechnology, on the other hand, will facilitate the design of nanomachines. Thus, nanotechnology will develop rapidly over the next decades.

In order to have at least some hope of understanding our future, we must understand the implications of the development of microelectronic technologies and nanocomputers.

They promise to bring changes as profound as the industrial revolution, antibiotics, and nuclear weapons all rolled up in one massive breakthrough. They will be useful for the life of society.

The prospects for the nanotechnology industry are truly ambitious. Nanotechnologies will fundamentally change all spheres of human life. On their basis, products and goods can be created, the use of which will revolutionize entire sectors of the economy.

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КУПОЛЬНЫЕ КОНСТРУКЦИИ

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Купольные конструкции как способ реализации новых идей. В статье мы поговорим о том, как развивались купольные конструкции в целом мире. В Древности купольные конструкции были вариантом завершения здания религиозного культа, а в современной архитектуре они перекрывают здания общественного и жилого назначения. В данной статье я покажу как совершенствовались и приобретались новые функциональные назначения на примерах выдающихся памятников архитектуры, а также мы рассмотрим развитие купольных решений в мире, начиная с древности и заканчивая применением их в современной архитектуре.

Первыми создателями купольной системы являлись древние римляне. Одним из первых куполов в Древнем мире является купол Пантеона, который был сооружён в 127 году нашей эры и стал важным элементом архитектуры в Древнем Риме, а также является самым древним куполом из ныне существующих куполов. Одним из первым материалов при строительстве купола являлся камень и дерево, но из-за сложности обработки и эксплуатации камень перестали использовать при строительстве купола. Сам же купол Пантеона был построен с применением более совершенного материала — бетона, в котором скрыт скелет из кирпичных арок. Распор

купола и его тяжесть воспринимаются массивными стенами толщиной 6 метров. Для облегчения стен и придания им зрительной легкости в них было установлено 8 внутренних больших ниш и столько же наружных пустот.

В эпоху возрождения мастера подарили новую жизнь купольным конструкциям. Например, Брунеллески, который спроектировал купол Святой Марии-дель-Фьоре во Флоренции, и это был один из первых шагов перехода от архитектуры Средневековья к архитектуре Ренессанса. Собор Святого Павла, творение архитектора конца XVII начала XVIII века Кристофера Рена, сочетает в себе элементы готики, классицизма и барокко и является примером дальнейшего развития купольных конструкций. Особенностью купола Рена является трехслойность, подобных которому не было еще в архитектуре. Данный купол состоит из внутреннего, внешнего и видимого каркаса. Внутренний играл роль потолка, внешний и видимый поддерживали каркас, который состоял из дерева и был покрыт свинцовыми листами. К созданию такой формы Рена подтолкнул известный своими работами в области химии и физики - Роберт Гук. Основную нагрузку несет купол, расположенный между внутренним и внешним куполами и имеющий форму конуса. Он сделан из кирпича и служит опорой для фонаря весом в 800 тонн. В процессе строительства было обращено внимание на то, что при слишком большом размере и массивности купола внутри отсутствовали колонны для поддержания свода. Для убеждения комиссии в том, что колонны для поддержания не нужны и купольная конструкция не рухнет Рен предоставил собственные расчеты. Но архитектору не поверили и было распоряжение установить для поддержания свода колонны. Рен выполнил это требование, но частично, потому что колонны по проекту не достигают потолка, между капителями и самим потолком остается свободное пространство, но осматривая собор снизу этого практически не видно. Рен создал второй ложный этаж для замаскировки массивных контрфорсов, которые поддерживают стены нефа и купол.

В конце XVIII века была открыта новая эпоха в строительстве куполов. Были увеличены пролеты, уменьшена толщина оболочки. Благодаря увеличению пролета и уменьшению толщины в совокупности с прочным материалом это позволяло создавать новые проекты сооружений с куполами до 100 метров в диаметре. В начале XIX века появилась сетчатая конструктивная схема и тем самым упрочнила положение металла в строительстве купольных конструкций. Конструкции стали прочнее, легче при монтаже, экономичней и вид был куда изящней по сравнению с куполами из дерева и железобетона, а главное конструкция позволила возводить сооружения до 250 метров в диаметре.

Раньше купольные конструкции в архитектуре применялись в храмовых сооружениях, но позже купольные конструкции стали популярны в зданиях другого функционального назначения. В XIX веке купольные конструкции использовались очень редко в строительстве жилых домов, а позже в строительстве больших оранжерей, в планетариях, в аудиториях, складах,

ангарах. С появлением новых материалов и развитием технологии строительства архитекторы стали проектировать еще более разнообразные формы купольных перекрытий.

Российский инженер и архитектор Шухов В.Г. в 1896 году запатентовал свою конструкцию перекрытий зданий и сооружений, которая получила название перекрытие-оболочка, она включает в себя выпуклые, мембранные, сетчатые и висячие оболочки. Геодезический купол является совершенствованной архитектурной формой и несущей сетчатой оболочкой, чем привлекает внимание к своей конструктивной системе. Патент на конструирование геодезических куполов получил Ричард Фуллер. Он считается родоначальником строительства купольных домов. Это революционная идея, связанная напрямую с купольными конструкциями. Дом с купольной конструкцией обладает колоссальными преимуществами: имеет необычный внешний вид, свободную планировку внутренних помещений из-за отсутствия внутренних опорных стен и колонн, возможность установки в сейсмически неблагоприятных районах, минимальные требования к фундаменту. Его отличает относительная дешевизна постройки и эзотерическая составляющая.

Имеются два варианта сооружений с применением купольных конструкций. Первый пример - это стадион «Астродам». Он был построен в 1965 году в Хьюстоне (США), и является родоначальником крытых стадионов с куполообразной крышей. Второй пример - это крупнейшее сферическое сооружение в мире — Глобен-Арена, была построена в 1989 году в Стокгольме (Швеция).

С большой скоростью меняются идеи строительства и архитектура, благодаря огромному опыту. Купольные конструкции не только на внешний вид выглядят эстетично, а также легко конструированы и недорогие в строительстве. По сравнению со средневековьем на сегодняшний день купольные конструкции используются для любого вида строительства: жилого и общественного. Разновидность купольных конструкций тоже велика, если сравнить с древними временами. Использование материалов, которые не только облегчают конструкцию, а также создают интересный вид для строительства разных видов строительства. Купольная система очень легка в монтаже, а ещё имеет большой пролёт, позволяющий разместить все что угодно под ним.

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